



DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMED FORCES PROFESSIONAL DEVELOPMENT &
MILITARY SKILLS TRAINING CENTER
U.S. CIOR MILITARY PENTATHLON TEAM
FORT SAM HOUSTON, TEXAS 78234-5002

REPLY TO
ATTENTION OF

December 19, 2002

RLBC—Head Coach

Subject: U.S. Military Pentathlon Pre-camp Training

Training for Military Pentathlon is multifaceted and tough. Success requires mastering five distinct disciplines. An extraordinary level of physical fitness, however, is the cornerstone of success, and a pentathlete *must* have a strong running and swimming base. Just as learning math precedes calculus, meeting our physical standards is the starting point in becoming a U.S. Military Pentathlete.

After meeting these standards, be mindful that Military Pentathlon is five events; and that you must do very well in *all* of them. Thus, a critical discipline in your training regimen will be to spend more time training in your weaker areas.

Note: If you do not meet the minimum standards in the 800-meter run, the 5-mile run, and the 50-meter swim, your chances of entry in to this program is normally zero percent. In several cases, even those who meet all the standards do not make the team—all 50 officers trying out for our 28 slots meet our standards—because they are unable to perform well on the obstacle courses. Or, they may not shoot the rifle or pistol well. Thus, train to far exceed the standards and report here in the best shape of your life. This will not only get you through our potentially demanding three-week selection camp, it's the first step of winning a gold medal, our goal.

Generally, any commissioned officer in the U.S. Armed Forces can, with enough training, meet the minimum standards on our application. But it's not easy for most, and for some it may take a year or longer to get there. Very few officers come through here unchallenged, and, for many, especially those who train to win, Military Pentathlon is undoubtedly the greatest physical challenge they've ever experienced. Making the team, for some, may become routine. When training to win, however, or breaking NATO records, the bar is raised, and even the most accomplished veterans find themselves stepping out of their comfort zones and into their toughest challenge ever. We expect you to take the ultimate challenge. We expect you to train for and reach your maximum potential.

The 2001 master schedule shows a minimum of 14-16 hours per week of commitment for a period of 24 weeks beginning on Monday, January 1, 2001. Your weekly commitments include 4-6 running workouts, 3-5 swimming workouts, 3 weight workouts, and at least 1 rifle and 1 pistol session. Making this team is tough but doable. Winning, however, will take all you've got. Do you have what it takes to win? We will be there to help you, but it starts with your commitment to become your very best, and to train every day with a burning desire to win. Welcome to U.S. Military Pentathlon. It's not for the fainthearted. Be there. To Win.

HOW TO USE THIS MANUAL

GETTING STARTED

This manual is the best guide available to you to make the team and win a gold medal in Military Pentathlon.

1. Print and insert your training manual in to a 3-ring binder with tabs to mark each of the 15 sections.
2. Read the entire manual in one sitting. This will take two hours.
3. Revisit Section 4, and complete the time trials and tests needed to assess where you are at the present, and record the results on the **Current Ability** form at the end of Section 4. To complete each of these tests and time trials with adequate recovery between the repetitions could take 3 to 4 weeks.
4. After completing the **Current Ability** form, write down your goals on the **Training Goals** form in Section 1. After signing the goal form at the bottom right, place it at the front of the manual where you can see it whenever you open the cover. Note to novices: You will not be able to complete the portion of the goal form regarding the team selection trials in marksmanship and the obstacle courses until after the first week of the training camp at Fort Sam Houston.
5. Develop your master training plan and strategies to achieve your goals using the information and guidance found in the remaining sections of this manual.
6. Commence Training.
7. Keep track of your progress using the logs and diaries provided, and adjust your goals and training schedule as necessary.

ADDITIONAL NOTES

Recommended and sample training schedules are provided in this manual. A sample Phase 3, Half-Mile Running Schedule, for example, is provided to show how a person with a maximum heart rate (MHR) of 181 should be training in the final 8 weeks of the 24-week training program who has the following credentials and goals at the outset: runs 5 miles in 30:00; runs a 2:20 half mile; and has a goal of running 5 miles in 28:30 and the half-mile between 2:05 and 2:10 when arriving to Fort Sam Houston in the summer. The sample schedule considers the four training energy systems and focuses on improving in the half mile while maintaining/improving the 30:00 time in the 5-mile run. You will note that our training program requires heart-rate monitoring. Do not neglect this critical aspect of high performance training.

Our training recommendations come from outside experts as well as years of carefully studying—including graduate-level thesis work—how our most successful pentathletes train. You are at liberty to train as you choose. However, this manual was developed for you. Regardless of your training choices, bring your training schedules and training logs—whatever format you choose to use—to Fort Sam Houston to be reviewed by your coaching staff when you arrive.

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Section 1 Training Goals

Train to Win

	Goal for Application (April 15)	Actual Result	Date	Goal@Team Selection (Summer)	Actual Result	Date
<u>RUN/SWIM</u>			/			/
5-Mile Run	_____	_____	/	_____	_____	/
800-m Run	_____	_____	/	_____	_____	/
400-m Run	_____	_____	/	_____	_____	/
50-m Swim	_____	_____	/	_____	_____	/
100-m Swim	_____	_____	/	_____	_____	/
<u>STRENGTH</u>						
Pushups	_____	_____	/	_____	_____	/
Situps	_____	_____	/	_____	_____	/
Pullups	_____	_____	/	_____	_____	/
Dips	_____	_____	/	_____	_____	/

TEAM SELECTION GOALS

METHOD

REASON

Land "O"	_____	Running	_____
		Swimming	_____
Swim "O"	_____	Weights	_____
		Nutrition	_____
5-Mile Run	_____	Flexibility	_____
		Mental	_____
Rifle	_____	Rifle	_____
		Pistol	_____
Pistol	_____	Orienteering	_____
		Agilities/Plyos	_____
Orienteering	_____	Deserving	_____

OTHER

WHAT

WHEN

WHY AM I DOING THIS?

Flexibility	_____	_____	1. _____
Cholesterol	_____	_____	2. _____
Triglycerides	_____	_____	3. _____
RHR	_____	_____	4. _____
Weight	_____	_____	5. _____
Blood Pressure	_____	_____	
% Body Fat	_____	_____	

Signature

Section 2

Military Pentathlon Events

Military Pentathlon is comprised of five distinct events that you will need to master. To be selected to the team, you must do well in *all* of them. Candidates in past years, for example, who have performed exceptionally well in 3 or 4 events, but were weak in 1 or 2 others, were cut. Mastery in all five events is required to be selected to this team.

Pentathlon Events

1. Rifle Marksmanship – Precision and rapid phase courses of fire performed in the prone position at 200 hundred meters.
2. Pistol Marksmanship – Precision and rapid fire phase courses of fire performed in the standing position at 25 meters.
3. NATO Land Obstacle Course – 500-meter course with 20 obstacles performed in BDUs and running shoes.
4. NATO Water Obstacle Course – 50-meter course with 5 obstacles performed in BDUs without boots.
5. Orienteering – 10-15 kilometer running map and compass course performed in boots and BDUs; the military skills of Map Reading, Distance Estimation, and Grenade Throwing are also tested.

For detailed information about Military Pentathlon and its events as well as the competition rule book, visit www.cior.org which is linked to our web site at www.militarypentathlon.com. Recommend your becoming intimately familiar with every aspect of Military Pentathlon. Being better informed will help you train better.

Team Composition

You will be selected to the team based upon your individual performances in each of the Pentathlon events. Once selected to the team, however, you will be placed on a 3-person team in one of the following categories:

Women's Team – 2 teams of three plus an alternate

Men's Novice (first-year) Team – 2 teams of three plus an alternate

Men's Experienced (years 2-4) Team – 2 teams of three plus an alternate

Men's Veteran (year 5 and over) Team – 2 teams of three plus an alternate

The team times for the Land and Water Obstacle Courses and the Orienteering event is determined by the last person across the finish line. In orienteering, however, only one team member serves as the orienteer while his or her 2 teammates, called "Iron Packers", divide among themselves 2 issued rifles

and a pistol to carry while running with the orienteer. Exceptional endurance running ability is required of these Iron Packers.

The team scores for rifle and pistol marksmanship are determined by pooling the individual scores of all 3 team members.

Section 3

Training Overview

Pre-Season Event Testing

You will not be tested in marksmanship prior to your arriving at Fort Sam Houston. However, all else being equal, a strong marksmanship background noted on your application will give you an edge when your application is reviewed by the selection committee. This also applies to orienteering.

You will, however, be tested, prior to submitting your application—your test results are part of your application due 15 April—in several running and swimming as well as other events. The 50- and 100-meter swim times are informative in regard to your potential on the Water Obstacle Course. Your 400- and 800-meter run times will indicate whether you have the levels of anaerobic conditioning needed for the Land Obstacle Course. The 5-mile run measures your running potential—*orienteering skills aside*—to orienteer or Iron Pack on a 10-15K course at a competitive speed.

How To Prepare for Selection

1. Rifle Marksmanship. Recommend finding a large bore rifle coach to teach you the fundamentals of rifle marksmanship and shoot at least once a week. If a 200-meter range and weapon is not available, acquire an air rifle for short range firing. Joining a rifle team can be very helpful.
2. Pistol Marksmanship. Find a pistol coach to teach you the fundamentals of two-hand grip pistol firing. Shoot at least once a week. If a 25-meter range and weapon is not available, acquire an air pistol for short range firing. Joining a pistol team can be very helpful.
3. Land Obstacle Course. Train a minimum of 2 months as a half-miler just prior to reporting to training camp after completing a base program in the Fall and a strong 10K race season during the Spring. The *minimum* half-mile time considered for men is 2:30; 3:00 for women. In addition, strength training, flexibility training, agility training, and plyometric training should be part of your regimen. A strong half-mile time and excellent flexibility, however, are the 2 key success factors that emerged from a statistical study that examined the common attributes of excellent Military Pentathlon obstacle course runners.
4. Water Obstacle Course. Train as a 50-meter free-style sprint swimmer. Strongly recommend finding a swim coach. The minimum 50-meter swim time considered for men is 35 seconds; 40 seconds for women. In addition, superior upper body strength from weight training is critical to negotiate some

of the obstacles effectively. Many pentathletes also find that joining a local masters swim team is very helpful.

5. Orienteering/Iron Packing – Orienteering is a skill that takes practice, which you can get if you join a local orienteering club and regularly attend their meets. Regarding fitness, whether you are an orienteer or an Iron Packer, you will need to train for a minimum of four months—to be completed prior to starting your half-mile program—as if you were training for a 10K race. For many reasons, joining a local running club can be helpful during the 10K phase of your training program.

Systemic Training

Our training program is system. Systemic Training means looking beyond the obvious primary training processes to the bigger picture of peak performance. Many good runners, for example, do not become *great* runners because they do not train systemically. Their rationale is that to become a better runner all they need to do is run. For a runner, however, beyond the obvious primary training process of running, there are other critical performance processes that must also be fully developed. These processes, for example, include Flexibility; Strength; Mental Control; Nutrition; and Rest and Recovery to name a few. Although a runner may run well by just running, he or she will perform substantially beneath his or her potential if the other critical performance factors remain undeveloped. This reality can be compared to a high performance engine with a faulty spark plug. For an engine to run at its maximum potential, every component of the system must be fully operational and completely engaged.

Systemic training, among other things, considers all of the components of physical fitness listed below:

Cardiorespiratory Endurance: The ability of the heart and lungs to meet the body's physiological needs to maintain a certain intensity and duration of exercise.

Muscular Strength: The ability of the muscle to offset resistance.

Muscular Power: The ability of the muscle to exert force.

Muscular Endurance: The ability of the muscle to handle a certain level of intensity for a measurable length of time.

Speed: Speed, or fast movement, is only possible when resistance to motion is minimal. Speed is increased when applying strength and power to overcome resistance.

Flexibility: The ability to increase the range of motion in joints through flexion and extension. An increased range of motion allows the joints to apply force over a longer time and decreases the muscular resistance to motion.

Body Composition: The body contains 2 types of muscle fiber: fast twitch and slow twitch. Most people have an equal percentage of both and are thus neither exceptional sprinters nor exceptional long-distance runners. Athletes having more fast twitch fiber than slow twitch are better sprinters, while runners with greater amounts of slow twitch fiber are better distance runners. Generally, training that maximizes the potential of one type of fiber will improve performance when using that fiber. Endurance training, for example, maximizes the capability of slow twitch fiber while speed training maximizes the capability of fast twitch fiber. The majority of evidence suggests that specificity training will not convert one muscle fiber to another, that you can not change what you were born with. Proper training, however, will allow you to fully develop both fiber systems for your own maximum performance for both sprinting and distance running.

The good news for most aspiring Military Pentathletes is that the ideal muscle balance for Military Pentathlon is equal amounts of fast and slow twitch fiber. The Military Pentathlete must be able to both sprint well and run long distances well, but he or she does not need to be either a world-class sprinter or world-class distance runner. In fact, world-class single-event specialists rarely make this team. We are looking for well-rounded athletes who do each of the Pentathlon events very well. This requires developing both your fast and slow twitch fibers to their maximum capability, which is what our training program is designed to do.

Systematic Training

When you examine the individual training components of the larger system, the micro processes of your macro training plan will all have a rhyme and reason. While systemic training considers the big picture and how one process affects another, systematic training examines the individual processes and routines—the swimming training process and the strength development process, for example—with the goal of maximizing your potential in every process you train in. Thus, systemic training assures you are training in all the right activities in order to ultimately peak perform, while systematic training assures the training you doing in each of those activities is being done correctly and progressively.

Principles of Systematic Training

Adaptation: Adaptation is defined as the change that occurs in response to athletic training. The purpose of training is to produce change—physiological, metabolic, and psychological—in order to increase athletic performance. When the body is maximally stimulated or stressed through exercise, it will adjust to the demands by rebuilding and strengthening the tissues involved in the exercise.

Overload: Overload training imposes demands on the body in order to stimulate growth. Without overload, there is no need for the body to change in order to handle the increased levels of training stress. Properly overloading the body by increasing the rate and intensity of exercise will cause a slight breakdown of the body's systems and, followed by proper rest and nutrition, the body will in turn build those systems to handle increased demands.

Regularity: Regularity refers to the necessity to maintain a consistent schedule. The physiological adaptations that your body goes through relies on this regularity in order to continue to adapt to the new stresses of training. Maintaining a rigid schedule is important in all aspects of training to include diet, rest, and sleep.

Progression: In order to continually improve, there must be a progression of increased intensity to prompt continued improvements. Progression, rather than an overly-aggressive regimen, provides the body with the time it needs to gradually build itself to meet the increased demands. Progression does not mean steadily increasing training intensity continuously and forever. Instead, the plotted training intensity over time should resemble a sine curve. Thus, the ideal pattern of progression simply prescribes an increase in training intensity and volume (upward progression) to overload the body followed by a decrease in training intensity and volume (downward progression) to allow the body to recover prior to the next period of upward progression or race.

Specificity: The type of training should relate, as closely as possible, to the specific actions that will be used during competition. Thus, training for Military Pentathlon requires training in both the specific body movements for those events as well as for the intensity levels needed in each of them to excel. For example, swimming is the main component of the water obstacle course. Thus, swimming is, of course, part of the training schedule. However, your swim practices must be designed with the end in mind. To swim the water obstacle course well, you need to be able to swim very fast for a short distance. Therefore, your swim training must focus on sprint swimming. Generally, all training in the beginning, whether running, swimming, or weight training, should be general enough to allow you to increase your technique and general levels of fitness. Then, as you approach the competition, training should become more specific to the competition event.

Balance: Meeting the demands placed on the body during training requires a balance of each of the variables involved in a systematic approach to training. Focusing on the primary discipline alone will not improve performance if the discipline does not incorporate the other aspects of total training. Improper balance can lead to deficiencies and even injury. Training for a discipline such as running must involve a balanced training regimen consisting of distance, speed, strength training, endurance, diet, rest, stretching, and mental focus.

Variety: Providing for a variety of activities in training helps maintain interest and

motivation while decreasing boredom or burn-out. Unstructured and alternative exercises or sports— aerobics or basketball, for example—are recommended during a training cycle to help maintain interest in the primary training discipline(s).

Recovery: Training involves systematically breaking down the body systems in order for growth to occur during the recovery period which allows you to continuously adapt to greater stresses until to have reached your maximum potential. Continuous breakdown without adequate recovery time, however, will not promote growth and will lead to injury or illness. Throughout a training cycle and between training cycles, recovery is essential if the body systems are to adapt and become stronger. Recovery includes incorporating hard days and weeks with easy days and weeks, training different and alternating muscle groups, and adhering to the programmed “Rest” day(s) or week(s) within and between training cycles.

PUTTING IT TOGETHER

Knowing you are doing all of the right things the right way will give you the peace of mind that each and all your efforts will pay off. Doing the right things the right way will get you to where you want to be with the least amount of energy which is an important factor when attempting to accelerate quickly to your maximum potential. When following a carefully designed training plan, you will know that every practice session and every repetition, whether in the weight room or in the pool or on the track, has its specific purpose in getting you to your ultimate goal. Thus, it is important to give 100% every moment. Every repetition adds up to a greater whole, and becomes the cumulative result of your being at your best when you report to Fort Sam Houston.

Training during the off season can become mundane. With no one there to watch and encourage you, your own volition and integrity will be the only determining factor as to whether or not you train at 100%. Eventually, however, the spot light will be shine your way, and the manner in which you have gone about training and the ways you have invested your time will become apparent to a large number of people. Winning a gold medal is something nobody can take away from you. And such an experience will become a bright light that will overshadow any and all of the mundane days of training it took to get you there. Give 100% percent. Anything less is not worth the time or effort.

Important

You will note that this manual provides very specific training guidance for a 24-week training schedule. It is important to note, however, that you must already be in superior shape before you begin this 24-week schedule. This means that, unless you are already very fit, you must build a training base for a minimum of 8 weeks— 12 weeks is recommended; especially if you have been out of training for a month

or more—prior to starting the 24-week program. An additional reason we recommend a 12-week base period instead of 8 weeks is to account for learning curves such as how to use a heart rate monitor or how to lift weights, as well as to overcome possible setbacks from common start-up injuries without impacting your calendar goals. The additional 4 weeks of base training simply provides a cushion.

Further, if you are out of training, you will need to train at least 8 weeks prior to undergoing the time trials and other assessments in Section 4 from which you will set your goals and create your 24-week training schedule. Completing this assessment accurately can take 3-4 weeks based upon the recovery time you need between assessing current maximum abilities in multiple events.

Lastly, for some it may take additional time to learn how to swim efficiently, how to shoot properly, how to eat better, or how to schedule your time for training amid an already busy life. This process should be done gradually, allowing you to move out of your current comfort zone gracefully as the fury builds in your gut to pull out all of the stops on the first day of your 24-week training schedule. On that day you must set out and train with a vengeance if you want to succeed here.

The 90% Rule

There will be times, for legitimate reasons, that you will need to miss a training session. The reasons could vary from work, to family, to residual fatigue, or to simply having a need to get out of the training scene for a day to recover mentally.

Because inevitable circumstances will cause you miss a training session or two, think of perfect attendance in terms of 90%. This applies to the whole system: Running; Swimming; Nutrition, etc. Using the 90% rule, if you eat 21 meals a week, feel free to blow your training diet twice a week. You shouldn't, for example, turn down a piece of cake on your birthday. Or, if you run 10 times every 2 weeks, feel free to drop a short distance run, but don't miss your intervals.

The bottom line is that the 24-week training program accounts for the 90% rule. If you are performing one hundred percent 90% of the time, you are doing perfect. Thus, don't allow a missed work out here and there to create stress. Instead, enjoy the break from the routine.

Training to win takes integrity. Be honest with yourself. Your conscience will tell you if you are missing a practice for the right or the wrong reason. In the moment of choice, exercise integrity. You need to push hard, but you also need to know when to back off. Be mature about it.

Section 4

Considerations for Developing a Training Schedule

Your training schedule is your road map to success. It begins with assessing your current levels of ability, followed by setting goals and planning your training to achieve them. A good training schedule allows you to have the assurance that every repetition you perform over the course of the training period has a definitive purpose.

A good training schedule is also systemic; it considers the whole of what you are trying to accomplish. The following are considerations to explore when developing your training schedule:

- I. The event and reason for training
 - creating your goals
 - base level goals
 - intermediate goals
 - ultimate goals
 - developing the method to achieve these goals
- li. Your Training Schedule
 - doing the right training activities the correct way
 - determining your time allotment
 - per event (rifle, pistol, running, swimming, weight lifting, stretching, etc.)
 - per day, numbers of hours
- lii. Elements of fitness and training (holistic approach: mental, physical, emotional)
 - specificity
 - nutrition
 - injury prevention
 - psychology, conditions and commitments
 - emotional strength and control
 - self discipline
 - relationships (social, personal, family)
 - mental acuity and judgment
 - job and unit constraints
 - self image (the phenomenon of feeling deserving)
 - independent will (spiritual connection)
 - recreation
 - outward purpose/benefits others receive from my goals
- IV. What I must do to achieve these goals
 - commitments/promises/deserving
 - review list above
 - develop a balanced/healthy regimen

Train to Win

Current Ability

	Time/Score	Date
<u>RUN/SWIM</u>		
5-Mile Run	_____	_____
800-m Run	_____	_____
400-m Run	_____	_____
50-m Swim	_____	_____
100-m Swim	_____	_____
<u>STRENGTH</u>		
Pushups	_____	_____
Situps	_____	_____
Pullups	_____	_____
Dips	_____	_____
<u>SKILLS</u>		
Rifle	_____	_____
Pistol	_____	_____
Orienteering	_____	_____
<u>OTHER</u>		
Flexibility	_____	_____
Cholesterol	_____	_____
Triglycerides	_____	_____
Weight	_____	_____
Blood Pressure	_____	_____
% Body Fat	_____	_____

Section 5
Master Training Plan
S A M P L E
 (24 weeks beginning in January)

Use this master plan as a guide to develop your weekly training schedules using the **Weekly Training Plan** form on the following page (make 24 copies and write in your planned workouts in each applicable block at least a week in advance of your upcoming week of training). The sample plan below represents a typical pentathlete's off season training commitments. You may need to adjust from this based upon your own strengths and weaknesses, but your time commitment should be 14-16 hours per week. Training in your weak areas, i.e., out of your comfort zone, can be difficult, but it's a critical success factor in becoming the well-rounded pentathlete athlete we are looking for.

<i>Train to Win</i>	PRIMARY TRAINING				SECONDARY TRAINING			
DAY	RUN/ ORIENTEER	SWIM	RIFLE	PISTOL	LIFT	MENTAL	OTHER*	TIME
SUN						X		1-2
MON	X	X						2
TUE	X				X			2
WED	X**	X						2
THU			X	X	X			4
FRI	X	X						2
SAT	X***				X			2-3
HOURS	5	3	1	1	3	1		14-16

* "Other" would include stretching, agilities, aerobics, high-speed lateral-movement activities such as basketball.

** include plyometrics

*** option (orienteering)

Train to Win

Weekly Training Plan

<i>Train to Win</i>	PRIMARY TRAINING				SECONDARY TRAINING			
DAY/DATE	RUN/ ORIENTEER	SWIM	RIFLE	PISTOL	LIFT	MENTAL	OTHER*	AMOUNT OF TIME
SUN								
MON								
TUE								
WED								
THU								
FRI								
SAT								
TOTALS/ HOURS								

Train to Win

Section 6

Running Training

Running training for Military Pentathlon is conducted in 3 phases as follows:

- Phase I - Base Phase (Fall)—8-12 weeks
- Phase II - Strength Phase (Winter)—16 weeks
- Phase III - Speed Phase (Spring)—8 weeks

The Base Phase is conducted in the Fall before the 24-week program begins. It consists of light running of 25-35 miles per week and should last a minimum of 8 weeks, although 12 weeks is highly recommended. Completing the Base Phase allows you to enter in to the Strength Phase in January in the shape you need to be in the complete it successfully.

The Strength Phase is a 16-week, 10K race program, which prepares you for the fitness levels you will need for successful orienteering or Iron Packing as well as building the additional strength you will need to enter into the Speed Phase.

The Speed Phase is an 8-week program designed to improve your half-mile run time for the Land Obstacle Course. The land obstacle course is often considered the greatest athletic challenge in Military Pentathlon. The obstacles require climbing, jumping, crawling, bounding, diving, and balance. Negotiating through this course requires tremendous explosive power. A competitor must possess exceptional muscular strength, muscular endurance, flexibility, cardiorespiratory endurance, and speed. The 8-week Speed Phase of your running training, which is conducted during the final weeks prior to reporting to the summer training camp, is designed to prepare you for the anaerobic punishment that comes with running this course at your maximum effort.

Sample running programs for each phase are provided on the following pages. Regarding the Strength Phase, however, we strongly suggest using a computer program called *RunMaster* to design your 16-week 10K training schedule. This software may be obtained from CW4 Denson at our office, (210) 221-2841. In any event, we highly recommend using a heart-rate monitor when training. Heart-rate training is simply state-of-art, and will allow you to achieve your maximum potential with no guess work. A good heart rate monitor which also includes a stop watch feature will cost \$100-\$130 dollars. A limited supply of heart rate monitors is also available from CW4 Denson.

In addition, included in this section is a sample 8-week half-mile Speed Phase schedule formatted in appearance to the 16-week 10K schedules created by the *RunMaster* program. Use this as a guide when developing your own final 8-week running program, keeping mind that you will need to adjust the times and heart rate ranges based upon your fitness levels, goals, and maximum heart rate.

Part of your running training also includes plyometrics, a leg muscle strengthening exercise discussed later in this section. In addition, you should also include in your training quick lateral movement and coordination developing activities such as basketball and aerobics.

Lastly, at the end of this section is a sample page (make 24 copies) of a running diary to complete after every run which we will review at Fort Sam Houston.

SYSTEMATIC RUNNING

The remainder of this section teaches the principles of effective running training and how to design your own running program. This begins with learning and understanding the terms and definitions associated with your training. Further, you will be required to learn and discover certain physiological characteristics about yourself, such as your maximum heart rate (MHR) in order to design a training program tailored specifically for you.

Metabolism: Metabolism is the process of storing and releasing energy. The efficiency of releasing energy for use by the body occurs in several ways through aerobic and anaerobic processes. Both are chemical processes and will be explained in very general terms.

Aerobic Metabolism: The most efficient production of energy occurs through aerobic metabolism. Aerobic simply means “with oxygen”. As you exercise, the body releases stored energy for use by the muscles, and produces energy for further use. Oxygen is needed for the efficient release of that energy. In the process of using the energy, you produce by-products, or waste. During aerobic metabolism, the waste produced which is carbon dioxide and water is easily removed from the body. The reason you breathe increasingly harder during exercise is to get rid of the carbon dioxide. Training in an aerobic state is essential to strengthen all the body’s processes in the production and use of energy. Therefore, one of the most important functions of training is to increase the rate of aerobic metabolism.

Anaerobic Metabolism: As exercise intensity increases you will reach a level where the body’s demands for energy exceed the body’s production capability. In this state you are producing energy through anaerobic metabolism, or “without oxygen”. In very simple terms, you cannot take in oxygen fast enough to meet the body’s needs because oxygen is an essential element in the production of energy. And because oxygen is not available in the needed amounts, energy production is low. Also, since oxygen is not available in sufficient quantity to aid in the elimination of waste, waste products combine and accumulate to form lactic acid. An accumulation of lactic acid will cause muscle fatigue and burn.

VO₂ Max: VO₂ Max is the amount of oxygen that a person can consume during one minute of exercise measured as the difference between the amount exhaled and the amount inhaled. Research has shown that exercising at specific intensities or percentages of VO₂ Max will result in specific physiological adaptations. Determining your VO₂ Max requires taking a stress test in a physiology laboratory—expensive equipment—and is really not necessary for this training. Guiding exercise through the use of a heart rate monitor can be accomplished effectively due to the reliable relationship between oxygen uptake and heart rate.

Anaerobic Threshold: Anaerobic threshold represents the training speed at which aerobic metabolism and lactic acid removal are operating at the maximal capacity where lactic acid is not accumulating in the muscles fast enough to produce fatigue. The concept behind anaerobic threshold training simply suggests that training at speeds that overload aerobic metabolism, yet not to a point where anaerobic metabolism occurs at a substantially high rate, will increase your aerobic endurance. When training at or slightly below your anaerobic threshold, your body will continue to adapt to buffer the effects of lactic acid build up thus delaying muscle fatigue, improving aerobic metabolism, and raising the threshold. As training progresses, and the anaerobic threshold becomes higher, you can sustain faster paces for longer periods of time. This type of training is recommended only after the aerobic metabolism pathways are strong. That is why it is very important to accumulate a base of endurance exercise discussed later in **How To Train**.

Determining Anaerobic Threshold: Obtaining an anaerobic threshold (AT), as well as VO₂ Max, requires a physiology laboratory to determine, but doing this is not necessary. You can, however, contact the exercise physiology department at your local university or college if you are interested in taking an exercise stress test. Many hospitals are also equipped to administer these tests. Theoretically, AT should equate to 80%-90% of maximum heart rate. The subjective measurement of anaerobic threshold is also determined by performance cues. While increasing exercise intensity, there is a feeling that coordination is reduced. Muscle “burn” also occurs and, most notably, the breathing changes from a deep rhythmic pattern to one of a sudden increased frequency. To determine anaerobic threshold without using a blood lactate acid measuring device, do the following:

1. Chooses a distance to run that is reliable, repeatable, is marked every one mile/kilometer. Distance should be 3-6 miles (5-10K).
2. Warm up for at least 10 minutes.
3. Run your predetermined distance at a pace that you feel is the maximum pace you can keep for that distance with no loss of pace. This, of course, is the hard part of the exercise. It is very important not to slow down. If you have to slow down, repeat the exercise later in the week.
4. After about 5 minutes, your heart rate will stabilize. If you ran the distance at a consistent pace, one that you feel that you could not increase without slowing down, this is the approximate anaerobic

- threshold. At the end of the run, determine your average heart rate using your heart rate monitor. Also make note of your subjective feelings such as breathing patterns and perceived effort. If you do not have a heart rate monitor, immediately determine your heart rate manually.
5. As with all exercise, make sure you do a warm-down which includes stretching.

Your AT heart rate should fall within 80%-90% of your MHR. If they do not closely match, guide your training using your AT heart rate and exercise at 5-10 beats below that rate for workouts that require you to reach 80%-90% of your MHR. For instance, if 80% of your MHR is 160bpm and your AT rate is 150bpm, training at 160bpm is above your AT and you are decreasing the efficiency of your workouts and will not gain any benefits from training at AT and may result in early "burn-out" or injury.

If you do not use a heart rate monitor, training at ranges at or below AT will require you to go on "feeling." If you completed this exercise, note the feeling you have and the perceived effort. When the training schedule requires you to do intervals, hills, or tempo runs or swims at 80%-90% MHR, do the workouts at a slightly easier pace to keep you close to your AT.

IMPORTANT NOTE: As your training progresses, you will find that your body's response to exercise will change. The heart is a muscle and when you strengthen that muscle by placing increased demands on it through exercise, you will find that the same workouts you did in the beginning of your program will become easier as you progress. During the first week of your training you will run a certain distance at a certain pace and record your heart rate. In week 16 of your program, that same distance and pace will result in a lower heart rate because your heart is stronger and does not have to exert itself as much to provide the same amount of blood to the body. The entire body will adapt in this way to accommodate the demands placed on it through exercise. To improve and become faster, the idea is to systematically increase the demands on the heart to increase your AT. This is why you use the heart rate as your focus during exercise. If you pay attention to maintaining a certain heart rate, as your heart becomes stronger, you will notice that you will begin to run faster to maintain a certain heart rate for that exercise. In essence, you are attempting to raise your AT to be able to maintain the same heart rate or perceived effort for longer periods of time and at a faster pace. This is the purpose behind heart rate training at or near AT - to get faster and go longer!

Obtaining Heart Rate: Training using different measurement methods, VO2 Max, maximum heart rate, anaerobic threshold, are all used to attempt to determine the same thing—how to maximize training to reach peak performance. Measuring training outcomes is concerned with identifying the slowest speed where aerobic metabolism is optimally maximized to the point where fatigue does not occur. This

manual will suggest a training regimen based on heart rate due to percentages of maximum heart rate equating to certain intensities, specifically, anaerobic threshold. As mentioned above, AT is approximately 80%-90% of your maximum heart rate so you will use your heart rate to determine training intensities. It would be easier if you owned a heart rate monitor but manually determining heart rate at the end of an interval or workout will suffice. You will determine your maximum heart rate (MHR), your resting heart rate (RHR), and your heart rate reserve (HRR), for use in guiding your intensity levels during each workout. To calculate the necessary heart rate measurements, use a heart rate monitor or use the manual method.

Manual Method: Place the middle pointer and ring finger of one hand to find a pulse in the wrist (base of the thumb), neck (on the left or right side of the throat just below the chin), or about two finger breadths below the left nipple. Use a watch on the other hand and count how many beats there are per minute. This is your heart rate expressed as beats per minute (bpm). You can also count the number of beats for 10 seconds and multiply by 6 to get the heart rate.

Resting Heart Rate (RHR):

1. As soon as you wake up, do not get out of bed unless you have to void. A full bladder will affect heart rate so if you have to void, return to bed after you are done and relax for a few minutes before you determine your RHR.
2. Using your heart rate monitor, determine your morning heart rate. It would be more accurate to take the average of 3 days worth of readings. If you do not have a heart rate monitor, determine heart rate using the manual method for 1 full minute.

Maximum Heart Rate (MHR):

MHR can be determined using an estimate based on a predetermined number and your age or by completing one of several workouts.

1. MHR estimate is calculated by taking 220 or 226 (average maximum heart rate) and subtracting your age.

Men	$220 - \text{age} = \underline{\hspace{1cm}}$	MHR
Women	$226 - \text{age} = \underline{\hspace{1cm}}$	MHR

2. Complete ONE of the following workouts.
 - a. Run one mile as fast as possible. Sprint the last quarter.
 - b. Run 800 meters as fast as possible. Rest for 1 minute. Run 800 meters as fast as possible sprinting the last 200 meters.
 - c. Run 6 repeats of 400 meters on a hill with increasing

intensity. Run the last two as fast as possible.

3. At the end of one of the above workouts, immediately determine your heart rate using the manual method for 10 seconds and multiplying by 6, or by using a heart rate monitor. Remember to warm-down after your workout.

Heart Rate Reserve (HRR):

This is your maximum heart rate or your estimated maximum heart rate minus your resting heart rate.

$$\text{MHR} - \text{RHR} = \text{HRR}$$

Calculating Target Heart Rate:

1. To calculate your target heart rate (THR) to guide you in training, use the following formula.

$$\text{HRR} \times \% \text{MHR (as decimal)} + \text{RHR} = \text{THR}$$

Example: Tom wants to run 10 easy miles at 60% to 70% of his MHR.

$$\text{RHR} = 50 \text{ bpm}$$

$$\text{MHR} = 190 \text{ bpm}$$

$$\text{HRR} = 190 - 50 = 140$$

$$\text{THR} = 140 \times .60 + 50 = 134 \text{ bpm}$$

$$\text{THR} = 140 \times .70 + 50 = 148 \text{ bpm}$$

Tom is completing his long run for the week and wants to stay at a 60% to 70% intensity level. His average heart rate would be **134 - 148 bpm**.

2. Use the following worksheet to calculate your personal heart rate ranges for the recommended training intensity levels for each workout.

CALCULATING INTENSITY LEVELS BASED ON MAXIMUM HEART RATE		
% MHR	Formula	Range
60% - 70%	HRR X .60 + RHR HRR X .70 + RHR	_____ - _____
70% - 80%	HRR X .70 + RHR HRR X .80 + RHR	_____ - _____
80% - 90%	HRR X .80 + RHR HRR X .90 + RHR	_____ - _____

90% - 100%	HRR X .90 + RHR HRR X 1.0 + RHR	_____ - _____
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Types of Workouts: Specific types of training are aimed at developing certain physiological adaptations in order for the body to improve. The following are brief definitions of the types of recommended workouts for your training schedule.

Endurance: Endurance workouts are essential in all phases of training. These types of workouts are done at a low intensity level, typically the long run of the week. Although the endurance is considered easy as far as intensity, the training benefit is due to this type of workout being longer in duration, therefore fatiguing. Endurance workouts develop aerobic energy pathways.

Tempo Runs: Tempo workouts are shorter than endurance workouts but are completed at a higher intensity. These types of workouts are typical of a medium distance run or swim done at a faster pace than endurance workouts. Tempo workouts develop aerobic energy pathways, develop faster twitch muscles, and get the body used to a faster, sustained pace.

Tempo Intervals: These are tempo runs that require you to maintain a pace at the higher limit of the recommended intensity of 80%MHR. Tempo intervals are tempo runs at a faster pace but each interval distance is shorter, and there is a rest between each interval.

Strength Weight Training: Completed at a low intensity level, strength workouts are necessary to develop the muscles utilized in every Military Pentathlon event. A low intensity level with complete recovery between sets typifies strength workouts.

Intervals: Interval training is completed at higher intensity levels typically at or near your anaerobic threshold. Interval training equates to running or swimming between obstacles on the obstacle courses or running between points during orienteering.

Hill: Hill workouts are running intervals on an incline. Hill workouts develop the muscles and energy pathways needed for explosive power. There are numerous obstacles on the land obstacle course that require jumping and landing. Explosive power is needed to recover from a landing and continue on to the next obstacle.

Race: Race workouts develop anaerobic and aerobic pathways needed to develop speed. Training at this high intensity level is reserved for the last training cycle, closer to an actual race. These workouts are difficult and

taxing on the body but will help in developing the speed necessary for that last surge at the end of a race. Many race workouts will be done during tryouts at the pentathlon summer camp.

DESIGNING YOUR RUNNING WORKOUTS

Pre-season running training for CIOR is performed in three cycles:

- Base Cycle — 8-12 weeks (October to January).
- Intensity Cycle — 16 weeks (January to May)
- Peak Cycle — 8 weeks (May through June)

The following menu may be used to design your running workouts which you will annotate on your weekly training schedule from Section 5 (page 17). However, we highly recommend using the *RunMaster* software package mentioned previously for the 16-week Intensity Cycle which, after you answer several questions cued by the program, will design your training schedule for you. If using *RunMaster*, select the 10K race option. For the 8-week Peak Cycle, we recommend using the 800-meter schedule found at the end of this section after adjusting the intensity to match your own heart-rate measurements and goals.

Cycle	Description	% Training	Workout Type	Intensity
I	Base Cycle. October to January. Minimum running of 20 per week. Low intensity levels focus on endurance. Strengthens anaerobic metabolism pathways. Most essential cycle.	60% 20% 20%	Endurance Tempo Interval	60-70% 70-80% 70-80%
II	Intensity Cycle. January to May. 16 weeks of increased intensity level and training volume. Strengthens aerobic pathways and begins to incorporate anaerobic pathways.	40% 20% 20% 20%	Endurance Tempo Interval Hill	60-70% 70-80% 80-90% 80-90%
III	Peak Cycle. May through June (report date). 8 week cycle focusing on speed and anaerobic endurance. Same types of workouts as in Cycle II but increased repetitions for interval swimming/running and hill workouts.	40% 20% 20% 20%	Endurance Tempo Interval Hill	60-70% 75-85% 85-95% 80-90%

Interpretation. “In Cycle I, 3 out of 5 of my running workouts (60% will be endurance runs at 60-70% of my MHR; 1 run (20%) will be a tempo run at a higher intensity (70-80% MHR); and 1 run will be an interval run at 70-80% MHR. I will refer to the Workout Menu for guidelines on distances, number of repetitions for each interval workout, and what day to do each type of workout.

Workout Menu
Cycle I
 8-12 Weeks
 (October to January)

Run at least 20 miles per week.

- 3 Endurance Runs (60-70% MHR)
- 1 Tempo Run (70-80% MHR)
- 1 Interval Run (80-90% MHR)

Endurance Run 60-70% MHR = _____ - _____ (heart rate zone)
 (4 to 12 miles)

- Select a short endurance run based on your current level of ability. Beginners should start with 4 to 5 miles and build from there. Complete that endurance run twice each week for the first 4 weeks, then add 1 mile every 1-2 weeks thereafter.
- The third endurance run of the week should be your longest endurance run (1 to 2 miles longer than your other 2 endurance runs).
- Increase the distance of your third endurance run throughout the cycle. A one-mile increase per 1-2 weeks is a good rule of thumb until you can do your longest run at 10-12 miles comfortably.
- The day after your weekly long endurance run should be a rest day.

Tempo Run 70-80% MHR = ____ - ____ (heart rate zone)
(3 to 6 miles)

- Schedule prior to a day of rest when your pace and distance increases to allow for recovery.
- Start with 3-4 miles and increase by 1 mile every two weeks until you are running 6 tempo miles comfortably.

Tempo Interval 80% MHR = ____ (do not exceed)
(1 to 4 miles total)

- Warm up 1 easy mile, cool down 1 easy mile
- A tempo interval is 1 mile.
- Example: If 3 miles are scheduled for this work out, run 1 mile at 80% MHR, rest 1:30, and repeat 2 more times.

Interval Run 70-80% MHR = ____ - ____ (heart-rate zone)
(100, 200 and 400 meters)

- Warm up 1 easy mile, cool down 1 easy mile
- Rest 1:30 after each interval
- Initially begin by selecting: 8X100m
- The following week: 6X200m
- The following week: 4X400m.
- Progress by increasing to 12X100m; 10X200m; and 8X400m.

Workout Menu
Cycle II
(16 weeks)
January to May

- Recommend using *RunMaster* Software, 16-week 10-K schedule, else design your training from the following guidance.

Run 25-35 miles per week. Begin with 25 miles, gradually peak at 35 miles, then taper back down to 25 miles per week.

- 2 Endurance Runs (60-70% MHR)
- 1 Tempo Run/Tempo Interval (70-80% MHR)
- 1 Interval Run (80-90% MHR)
- 1 Hill Run (80-90% MHR)

Endurance Run 60-70% MHR = _____ - _____ (heart rate zone)
(4 to 12 miles)

- Complete 2 Endurance Runs per week.
- Your Endurance Runs should be longer in distance than in Cycle I based on your current fitness level.
- Complete the endurance runs closer to your 70% MHR.
- The second/last endurance run of the week should be your longest endurance run at 1-2 miles longer than your first Endurance Run
- The day after your weekly long endurance run should be a rest day.

Tempo Run 70-80% MHR = _____ - _____ (heart rate zone)
(4 to 8 miles)

- Schedule prior to a day of rest when your pace and distance increases to allow for recovery.
- Increase over Cycle I from 3-6 miles to 4-8 miles for each Tempo Run.
- Complete the Tempo Runs closer to your 80% MHR.

Tempo Interval 80% MHR = _____ (do not exceed)
(2 to 4 miles total)

- Warm up 1 easy mile, cool down 1 easy mile
- A tempo interval is 1-2 miles.
- Workout/Week 1: Interval of 2 miles completed 1 time.
- Workout/Week 2: Interval of 2 miles completed 2 times with 3:00 rest in between.
- Workout/Week 3: Interval of 1 mile, rest 1:30, repeat 2 more times.
- Workout/Week 4: Interval of 1 mile, rest 1:30, repeat 3 more times.
- Repeat this cycle for weeks 6-8, 9-12, and 13-16.

Interval Run 80-90% MHR = _____ - _____ (heart-rate zone)
(50, 100, 200, 400 and 1200 meters)

- Warm up 1 easy mile, cool down 1 easy mile
- Rest 1-6 minutes between intervals depending on how fast you complete the interval. If running at the upper end of MHR, allow for more rest.

Recommend following progression:

- Week 1 = 12X100-m Intervals
- Week 2 = 12X400-m Intervals
- Week 3 = 12X200-meter Intervals
- Week 4 = 3X1200-meter Intervals
- Week 5 = 16X50-meter Intervals

Repeat Cycle with increased reps:

- Week 6 = 14X100-m Intervals
- Week 7 = 14X400-m Intervals
- Week 8 = 18X200-meter Intervals
- Week 9 = 5X1200-meter Intervals
- Week 10 = 18X50-meter Intervals

Repeat Cycle with decreased reps:

- Week 11 = 12X100-m Intervals
- Week 12 = 12X400-m Intervals
- Week 13 = 12X200-meter Intervals
- Week 14 = 3X1200-meter Intervals
- Week 15 = 16X50-meter Intervals
- Week 16 = Jog 1 mile and stretch (no intervals)

Hill 80-90% MHR = _____ - _____ (heart-rate zone)
(200 Meters)

- Hill workouts are completed on a 200-meter incline (NLT 30% grade) at 80-90% MHR.
- Use progression: begin with 8 and increase 1 per week until you peak at 14 in the middle of the training cycle (3 weeks of 14 hills) then taper down each week to 8 with no hills during week 16.

Workout Menu
Cycle II
(8 weeks)
May through June (Report date)

- Recommend using the 800-meter schedule at the end of this section by adjusting for your MHR and goals, else design your training from the following guidance.

Run 25-30 miles per week. Begin with 25 miles, gradually peak at 30 miles, then taper back down to 25 miles per week.

- 2 Endurance Runs (60-70% MHR)
- 1 Tempo Run/Tempo Interval (75-85% MHR)
- 1 Interval Run (85-95% MHR)
- 1 Hill Run (80-90% MHR)

Endurance Run 60-70% MHR = ____ - ____ (heart rate zone)
(4 to 10 miles)

- Complete 2 Endurance Runs per week.
- Complete the endurance runs closer to your 70% MHR.
- The second/last endurance run of the week should be your longest endurance run at 2-3 miles longer than your first Endurance Run
- The day after your weekly long endurance run should be a rest day.

Tempo Run 75-85% MHR = ____ - ____ (heart rate zone)
(4 to 8 miles)

- Schedule prior to a day of rest when your pace and distance increases to allow for recovery.
- Same distances as Cycle II but at a faster pace.
- Complete the Tempo Runs closer to your 85% MHR.

Tempo Interval 85% MHR = _____
(4 to 6 miles total)

- Warm up 1 easy mile, cool down 1 easy mile
- A tempo interval is 1-2 miles.
- Workout/Week 1: Interval of 2 miles completed 2 times with 3:00 rest in between.
- Workout/Week 2: Interval of 2 miles completed 3 times with 3:00 rest in between.
- Workout/Week 3: Interval of 1 mile, rest 1:30, repeat 3 more times.
- Workout/Week 4: Interval of 1 mile, rest 1:30, repeat 4 more times.
- Workout/Week 5: Interval of 1 mile, rest 1:30, repeat 4 more times.
- Workout/Week 6: Interval of 1 mile, rest 1:30, repeat 3 more times.
- Workout/Week 7: Interval of 1 mile, rest 1:30, repeat 2 more times.
- Workout/Week 8: Interval of 1 mile, rest 1:30, repeat 2 more times.

Interval Run 85-95% MHR = _____ - _____ (heart-rate zone)
(100, 200, 400 and 1200 meters)

- Warm up 1 easy mile, cool down 1 easy mile
- Rest 1-6 minutes between intervals depending on how fast you complete the interval. If running at the upper end of MHR, allow for more rest.

Recommend following progression:

- Week 1 = 16X100-m Intervals
- Week 2 = 16X400-m Intervals
- Week 3 = 16X200-meter Intervals
- Week 4 = 6X1200-meter Intervals
- Week 5 = 16X50-meter Intervals
- Week 6 = 16X200-meter Intervals
- Week 7 = 16X100-m Intervals
- Week 8 = 16X100-m Intervals

Hill 80-90% MHR = _____ - _____ (heart-rate zone)
(200 Meters)

- Hill workouts are completed on a 200-meter incline (30% grade) at 80-90% MHR.
- Use progression: begin with 10, add 2 each week to peak at 16 (2 weeks of 16) in the middle of the training cycle, then taper down each week to 8.

PHASE 3, 8-WEEK SAMPLE RUNNING TRAINING SCHEDULE

Week # 1		800-Meter/5-Mile Training Schedule						800-M Goal Time: 2:10		
								5-Mile Goal Time: 28:30		
DAY OF WEEK	DATE	TYPE OF WORKOUT	WARM-UP DISTANCE	# OF REPEATS	DISTANCE OR LENGTH OF REPEATS	PACE PER MILE OR PACE PER REPEAT	HEART RATE RANGE	REST AFTER EACH REPEAT	COOL-DOWN DISTANCE	TOTAL MILES
SUN		DAY OFF STRETCHING			STRETCHING					
MON		SPRINTS SPEED DEVELOPMENT	2 MILES	6-8	100	:14 TO :15		WALK/JOG 100 METERS	1 MILE	4.0
TUE		EASY RUN AEROBIC CONDITIONING			4 MILES	7:54 TO 8:14 MIN/MILE	60-70%MHR			4.0
WED		PACE INTERVALS ANAEROBIC CAPACITY TRAINING	1 MILE	8	400	1:24 TO 1:30	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	4.0
THU		DAY OFF STRETCHING			STRETCHING					
FRI		TEMPO RUN ANAEROBIC CONDITIONING			4 MILES	6:46 TO 6:54 MIN/MILE	75-85%MHR			4.0
SAT		LONG RUN AEROBIC CAPACITY TRAINING			8 MILES	7:44 TO 8:03 MIN/MILE	60-70%MHR			8.0

TOTAL WEEKLY MILES 24.0

PHASE 3, 8-WEEK SAMPLE RUNNING TRAINING SCHEDULE

Week # 2

800-Meter/5-Mile Training Schedule

800-M Goal Time: 2:10

5-Mile Goal Time: 28:30

DAY OF WEEK	DATE	TYPE OF WORKOUT	WARM-UP DISTANCE	# OF REPEATS	DISTANCE OR LENGTH OF REPEATS	PACE PER MILE OR PACE PER REPEAT	HEART RATE RANGE	REST AFTER EACH REPEAT	COOL-DOWN DISTANCE	TOTAL MILES
SUN		DAY OFF STRETCHING			STRETCHING					
MON		HILLS SPEED/STRENGTH DEVELOPMENT	1 MILE	6-8	200	:43 TO :46	80-90%MHR	2:00 JOG BACK	1 MILE	3.0
TUE		EASY RUN AEROBIC CONDITIONING			4 MILES	7:54 TO 8:14 MIN/MILE	60-70%MHR			4.0
WED		PACE INTERVALS ANAEROBIC CAPACITY TRAINING	1 MILE	8	400	. 1:24 TO 1:30	85-90%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	4.0
THU		DAY OFF STRETCHING			STRETCHING					
FRI		TEMPO RUN ANAEROBIC CONDITIONING	1 MILE		3 MILES	6:42 TO 6:50 MIN/MILE	75-85%MHR		1 MILE	5.0
SAT		LONG RUN AEROBIC CAPACITY TRAINING			6 MILES	7:36 TO 7:55 MIN/MILE	60-70%MHR			6.0

TOTAL WEEKLY MILES

22.0

PHASE 3, 8-WEEK SAMPLE RUNNING TRAINING SCHEDULE

Week # 3

800-Meter/5-Mile Training Schedule

800-M Goal Time: 2:10

5-Mile Goal Time: 28:30

DAY OF WEEK	DATE	TYPE OF WORKOUT	WARM-UP DISTANCE	# OF REPEATS	DISTANCE OR LENGTH OF REPEATS	PACE PER MILE OR PACE PER REPEAT	HEART RATE RANGE	REST AFTER EACH REPEAT	COOL-DOWN DISTANCE	TOTAL MILES
SUN		DAY OFF STRETCHING			STRETCHING					
MON		SPRINTS SPEED DEVELOPMENT	2 MILES	6-8	100	:14 TO :15		1:45	1 MILE	4.0
TUE		EASY RUN AEROBIC CONDITIONING			4 MILES	7:54 TO 8:14 MIN/MILE	60-70%MHR			4.0
WED		PACE INTERVALS ANAEROBIC CAPACITY TRAINING	2 MILES	6	400	1:15 TO 1:20	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	4.5
THU		DAY OFF STRETCHING			STRETCHING					
FRI		TEMPO RUN ANAEROBIC CONDITIONING	1 MILE		3 MILES	6:30 TO 6:40 MIN/MILE	75-85%MHR		1 MILE	5.0
SAT		LONG RUN AEROBIC CAPACITY TRAINING			6 MILES	7:36 TO 7:55 MIN/MILE	60-70%MHR			6.0

TOTAL WEEKLY MILES

23.5

PHASE 3, 8-WEEK SAMPLE RUNNING TRAINING SCHEDULE

Week # 4

800-Meter/5-Mile Training Schedule

800-M Goal Time: 2:10

5-Mile Goal Time: 28:30

DAY OF WEEK	DATE	TYPE OF WORKOUT	WARM-UP DISTANCE	# OF REPEATS	DISTANCE OR LENGTH OF REPEATS	PACE PER MILE OR PACE PER REPEAT	HEART RATE RANGE	REST AFTER EACH REPEAT	COOL-DOWN DISTANCE	TOTAL MILES
SUN		DAY OFF STRETCHING			STRETCHING					
MON		HILLS SPEED/STRENGTH DEVELOPMENT	1 MILE	6-8	200	:40 TO :43	80-90%MHR	2:00 JOG BACK	1 MILE	3.0
TUE		EASY RUN AEROBIC CONDITIONING			5 MILES	7:54 TO 8:14 MIN/MILE	60-70%MHR			5.0
WED		SPEED INTERVALS ANAEROBIC CAPACITY TRAINING	1 MILE	4	600	1:35 TO 1:43	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	3.5
THU		DAY OFF STRETCHING			STRETCHING					
FRI		TEMPO RUN ANAEROBIC CONDITIONING	1 MILE		3 MILES	6:20 TO 6:30 MIN/MILE	75-85%MHR		1 MILE	5.0
SAT		LONG RUN AEROBIC CAPACITY TRAINING			6 MILES	7:36 TO 7:55 MIN/MILE	60-70%MHR			6.0

TOTAL WEEKLY MILES

22.5

PHASE 3, 8-WEEK SAMPLE RUNNING TRAINING SCHEDULE

Week # 5

800-Meter/5-Mile Training Schedule

800-M Goal Time: 2:10

5-Mile Goal Time: 28:30

DAY OF WEEK	DATE	TYPE OF WORKOUT	WARM-UP DISTANCE	# OF REPEATS	DISTANCE OR LENGTH OF REPEATS	PACE PER MILE OR PACE PER REPEAT	HEART RATE RANGE	REST AFTER EACH REPEAT	COOL-DOWN DISTANCE	TOTAL MILES
SUN		DAY OFF STRETCHING			STRETCHING					
MON		SPRINTS SPEED DEVELOPMENT	1 MILE	10-12	50	:06 TO :07		WALK/JOG 50 METERS	1 MILE	2.5
TUE		EASY RUN AEROBIC CONDITIONING			4 MILES	7:54 TO 8:14 MIN/MILE	60-70%MHR			4.0
WED		SPEED INTERVALS ANAEROBIC CAPACITY TRAINING	1 MILE	6	300	:43 TO :48	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	3.0
THU		DAY OFF STRETCHING			STRETCHING					
FRI		TEMPO RUN ANAEROBIC CONDITIONING	1 MILE		3 MILES	6:10 TO 6:20 MIN/MILE	75-85%MHR		1 MILE	5.0
SAT		LONG RUN AEROBIC CAPACITY TRAINING			6 MILES	7:36 TO 7:55 MIN/MILE	60-70%MHR			6.0

TOTAL WEEKLY MILES

20.5

PHASE 3, 8-WEEK SAMPLE RUNNING TRAINING SCHEDULE

Week # 6

800-Meter/5-Mile Training Schedule

800-M Goal Time: 2:10

5-Mile Goal Time: 28:30

DAY OF WEEK	DATE	TYPE OF WORKOUT	WARM-UP DISTANCE	# OF REPEATS	DISTANCE OR LENGTH OF REPEATS	PACE PER MILE OR PACE PER REPEAT	HEART RATE RANGE	REST AFTER EACH REPEAT	COOL-DOWN DISTANCE	TOTAL MILES
SUN		DAY OFF STRETCHING			STRETCHING					
MON		SPEED INTERVALS ANAEROBIC CAPACITY TRAINING	1 MILE	6	200	:30 TO :35	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	4.0
TUE		EASY RUN AEROBIC CONDITIONING			4 MILES	7:54 TO 8:14 MIN/MILE	60-60%MHR			4.0
WED		SPEED INTERVALS ANAEROBIC CAPACITY TRAINING	1 MILE	4	400	1:00 TO 1:06	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	3.0
THU		DAY OFF STRETCHING			STRETCHING					
FRI		TEMPO RUN ANAEROBIC CONDITIONING	1 MILE		3 MILES	6:10 TO 6:20	75-85%MHR		1 MILE	5.0
SAT		LONG RUN AEROBIC CAPACITY TRAINING			6 MILES	7:36 TO 7:55 MIN/MILE	60-70%MHR			6.0

TOTAL WEEKLY MILES

21.0

PHASE 3, 8-WEEK SAMPLE RUNNING TRAINING SCHEDULE

Week # 7

800-Meter/5-Mile Training Schedule

800-M Goal Time: 2:10

5-Mile Goal Time: 28:30

DAY OF WEEK	DATE	TYPE OF WORKOUT	WARM-UP DISTANCE	# OF REPEATS	DISTANCE OR LENGTH OF REPEATS	PACE PER MILE OR PACE PER REPEAT	HEART RATE RANGE	REST AFTER EACH REPEAT	COOL-DOWN DISTANCE	TOTAL MILES
SUN		DAY OFF STRETCHING			STRETCHING					
MON		STRENGTH INTERVAL ANAEROBIC CAPACITY TRAINING	1 MILE	6	200	:30 TO :33	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	3.0
TUE		EASY RUN AEROBIC CONDITIONING			4 MILES	7:54 TO 8:14 MIN/MILE	60-70%MHR			4.0
WED		SPEED INTERVALS ANAEROBIC CAPACITY TRAINING	1 MILE	1 1 1	1000 600 300	2:45 TO 3:05 1:35 TO 1:45 :43 TO :47	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	3.0
THU		DAY OFF STRETCHING			STRETCHING					
FRI		EASY RUN AEROBIC CONDITIONING			4 MILES	7:54 TO 8:14 MIN/MILE	60-70%MHR			4.0
SAT		LONG RUN AEROBIC CAPACITY TRAINING			6 MILES	7:36 TO 7:55 MIN/MILE	60-70%MHR			6.0

TOTAL WEEKLY MILES 20.0

PHASE 3, 8-WEEK SAMPLE RUNNING TRAINING SCHEDULE

Week # 8		800-Meter/5-Mile Training Schedule						800-M Goal Time: 2:10		
								5-Mile Goal Time: 28:30		
DAY OF WEEK	DATE	TYPE OF WORKOUT	WARM-UP DISTANCE	# OF REPEATS	DISTANCE OR LENGTH OF REPEATS	PACE PER MILE OR PACE PER REPEAT	HEART RATE RANGE	REST AFTER EACH REPEAT	COOL-DOWN DISTANCE	TOTAL MILES
SUN		DAY OFF STRETCHING			STRETCHING					
MON		SPEED INTERVALS ANAEROBIC CAPACITY TRAINING	2 MILES	6-8	100	:13 TO :14	85-95%MHR	WALK/JOG 100 METERS	1 MILE	3.5
TUE		EASY RUN AEROBIC CONDITIONING			4 MILES	7:54 TO 8:14 MIN/MILE	60-70%MHR			4.0
WED		SPEED INTERVALS ANAEROBIC CAPACITY TRAINING	1 MILE	3	400	:56 TO :60	85-95%MHR	WALK UNTIL HR DROPS TO 120	1 MILE	3.0
THU		DAY OFF STRETCHING (Novices travel to FSH)			STRETCHING					
FRI		EASY RUN (FSH) ACTIVE REST			2 MILES	7:54 TO 8:14 MIN/MIL	60-70%MHR			2.0
SAT		TIME TRIAL	1 MILE		800 METERS	2:05 - 2:10	95-100%MR		1 MILE	2.5

TOTAL WEEKLY MILES 15.0

PLYOMETRICS

Plyometrics are anaerobic exercises that enhance speed and develop specific muscle strength to yield power. Thus, incorporating plyometrics into your training is an excellent means of developing and mimicking the specific leg muscles and motions associated with running the Land Obstacle Course. Conducting plyometrics properly relies on utilizing the maximum amount of energy stored in the muscle for a maximum effort. Thus, full recovery between repetitions, sets, and sessions is essential.

Plyometrics should be completed after intervals or tempo runs on a soft surface such as a rubber or cork track or a grassy field. Begin with 1 set of 8 repetitions per each of the 5 exercise covered below. Increase the repetitions by 1 per week until you reach 12. Then begin doing 2 sets of 8 with full recovery in between, and again increasing your repetitions by one per week. After reaching 2 sets of 12 repetitions, increase the sets to 3 by again starting with 8 repetitions each and increasing by 1 per week until reaching 12. Continue with 3 sets of 12 repetitions each week per exercise until reporting to the summer training camp.

PLYOMETRIC SETS AND REPS

Week	# Sets	# Reps
1	1	8
2	1	9
3	1	10
4	1	11
5	1	12
6	2	8
7	2	9
8	2	10
9	2	11
10	2	12
11	3	8
12	3	9
13	3	10
14	3	11
15-24	3	12

PLYOMETRIC EXERCISES

Alternating Split Squat

1. Begin by standing with one foot well in front of you, and the second foot well behind you so that there is 2-3 feet, depending on how tall you are, between the heel of your front foot and the toe of your rear foot. The farther back the rear leg, the greater the range of motion.
2. With your arms extended out to the side and parallel to the ground, lower the knee of your rear leg as near the ground as possible without touching the ground. This is the starting position.
3. Once in the starting position, jump as high as possible while switching legs in midair so that the back leg goes to the front and vice versa.
4. Landing with the other leg now out front, allow your body to move back into the alternated starting position as quickly as possible.
5. As soon as you are back into the starting position, repeat the exercise as quickly and forcefully as possible, while again switching your legs in mid air, and trying to get as high off the ground as possible. After you have jumped twice, once in each of the alternating starting leg positions, you will have completed 1 repetition. Thus, 8 repetitions equates to 16 alternating jumps; 12 repetitions is 24 jumps.

Note that the farther the rear leg extends out and the lower the knee drops, the more difficult the exercise is which is what you want. Keep repeating this exercise until you have done the required amount of repetitions.

Single Leg Bound

This exercise is an exaggerated running motion performed while continually landing on the same leg and using the other leg to help propel the body upward and forward

1. While standing, position your body with your left leg on the ground and the right leg off the ground with the right knee behind the left leg. The left arm is behind the body and the right arm is forward.
2. Bound off the left leg while pumping the arm and propelling the right leg forward.
3. In mid air, bring the right leg back while bringing the left forward again.
4. Land on the left leg and immediately bound off the left leg again.
 - Propel the body as far forward and as high as possible.
 - Continue on the left leg for 8-12 bounds (refer to the table above for the correct number of repetitions) then, in mid stride, land on the right leg and bound on the right leg for the same amount as you did for the left.

Double Leg Bound

This exercise is also an exaggerated running action.

1. Start while standing or while in a slow jog. Bound as high as possible while moving forward. Use your arms to help propel you upward.
2. Continue with your stride.
3. Land on the other leg and bound up and forward as fast as possible trying to maintain yourself in the air as long as possible. Two steps is 1 repetition.

Stadium Hops

This plyometric exercise is done on stadium or bleacher steps. Stand with your legs shoulder width apart and your hands on your hips or the back of your neck. Hop up 8-12 steps with light and quick landings that accentuate the spring to the next step.

Squat Jump

This exercise requires at least two boxes or platforms. The height is a personal preference but should be high enough to maximize your ability to elevate your center of gravity. It should not be so high that you spend more time absorbing the landing and not maximizing your ability to quickly explode off the ground to jump to the next box or platform.

1. With your hands at your waist or out to the side for balance, stand at the top of the box with in a squat position.
2. Step off the box and land in a 90-degree squat.
3. Explode off the ground and land on the next box in a squat position. Use your arms for balance, but do not use your arms to propel you upward. Instead, isolate and maximize the explosion in the legs.

RUNNING DIARY

WEEK ____ DATES _____

SESSION	DATE TIME CONDITIONS	ROUTE LOCATION ATTIRE	WORKOUT	MENTAL	PHYSICAL	OTHER

Section 7

Orienteering Training

This manual does not include information on how to orienteer. There are excellent books and videos that cover this subject adequately. If you desire be an orienteer in Military Pentathlon, recommend that you log on the U.S. Orienteering Federation's Web at www.us.orienteering.org, acquire the material and equipment you need, and join a local orienteering club.

A rule of thumb to train by, however, is that successful orienteering in Military Pentathlon for Novices and Women requires that you orienteer at an average of 10 minutes per 1000 meters; 6-7 minutes per 1000 meters for male Veterans. Therefore, a Novice or female competitor, you should report to the summer camp with the ability to run an advanced orienteering course—a "blue" course—10 kilometers long in one hour and forty minutes. Keep in mind, however, that in Military Pentathlon there is only one orienteer per 3-person team. Thus, if you are not a strong orienteer, you will still be considered for a slot on this team as an Iron Packer if you have good distance running ability.

KEEP A COMPETITION LOG

The reasons to log your competitions include:

- it's an aid to self improvement
- it's an aid to useful coaching
- it provides for a healthful appreciation for skills development

The first step in the process is:

- Date your map and plot your course
- Record date in competition log in Section A
- Record total time (in minutes) in Section B
- Divide time by the distance (Min/Km) and record results in Section B
- Measure the distance between each control point and record in Section B, Column 1

If you used your watch to time each leg, the following additional steps should be taken:

- Record splits from each leg in Section B, Column 2
- Divide the time by the distance (Min/Km) and record the results in Section B, Column 3
- Compare the average Min/K for the overall course time with the individual Min/K per leg to identify strong or weak legs

If you did not use your watch to keep splits, estimate "lost/recovery" time.

Also, write down the winning time for the course, and mark this time on your map beside your time and placing.

When arriving home, transfer this data on to your log sheet. Note that 3 columns represent 1 event if you used your watch to keep split times; and that 2 columns represent 1 event if you did not use your watch to record split times.

Section A is self-explanatory. Determine the number of problem controls based upon the points that you believe caused you to lose significant time.


Sections B and C require copying the numbers you have already placed on your map at the competition site. The estimated lost time should be added across and down after you have logged seven events. The percentages in the last column are derived by dividing the sums in each row by the total estimated lost time.

Sections D and E are marked with the numbers of the log in which the item occurred.

Stop at this point until you have completed four races. In the sum column, count the number of separate legs for each item occurrences by the total number of legs over the 4 events. Note that it is not necessary to complete the sum column until your next orienteering meet.

At this point, your trends should become obvious. You should be able to pick them out quickly and mark them on the back. In the remarks, you may develop a personal plan for training away errors. Put your thoughts down and get feedback from a coach or a good orienteer. This tool may be the most valuable coaching assistance you will get in your training process.

ORIENTEERING COMPETITION LOG

DATE 	MEET 1	MEET 2	MEET 3	MEET 4	MEET 5	MEET 6	MEET 7	SUM	%
Number of Controls									
Number of Problem Points									
1 st Leg									
2 nd Leg									
3 rd Leg									
4 th Leg									
5 th Leg									
6 th Leg									
7 th Leg									
8 th Leg									
9 th Leg									
10 th Leg									
11 th Leg									
12 th Leg									
13 th Leg									
14 th Leg									
15 th Leg									
16 th Leg									
17 th Leg									
18 th Leg									
19 th Leg									
20 th Leg									
STATS:									
Estimated time lost									
Placing									
Minutes behind winner									
WHAT WENT WRONG?									
Concentration at start CS									
Concentration at control s UC									
Map memory MM									
Misunderstanding map MU									
Pacing was off P									
Precision map reading PM									
Planning of route choice PR									
Precision compass PC									
Rough compass RC									
Rough map reading RM									
180 out OO									

Other:									
Other:									
Other:									
WENT WRONG BECAUSE:	1	2	3	4	5	6	7	SUM	%
Too hurried									
No sure attack point									
Parallel error									
Took a chance									
Underestimated									
Unconcentrated									
Saw other runners									
Over excited									
Didn't read description									
Too slow									
Unusual terrain									
Fatigue									
Hesitation									
Other:									
Other:									
Other:									

COMPETITION LOG

MEET	DATE	PLACE	HOST	CLASS	MAP QUALITY	SCALE	TERRAIN	WEATHER
1								
2								
3								
4								
5								
6								
7								

Section 8

Swimming Training

The following page presents a 24-week master schedule for swimming training. Swimming well, however, regardless of how hard you swim, is more of a function of stroke efficiency than strength or effort. Thus, the following schedule will not serve you well unless you swim properly. If you are an advanced swimmer, you may find little or no use in the recommendations on the following page. If you are a beginning swimmer, our recommendations will work well for you provided you start this schedule only after having been coached in your swimming technique. The best advice is to join a master's swim team, explain to the coach what you are training for, and follow his or her schedules. If joining a swim team is not practical or possible, at a minimum, gain the benefits by getting a critique of your swim stroke by someone who knows what they are doing. Once you get your stroke down, follow the 24-week program we have provided.

The 24-week program calls for a minimum of 3 swimming sessions per week. If using this program, recommend completing the sessions every other day such as Monday, Wednesday, and Friday or Tuesday, Thursday and Saturday.

SWIMMING TRAINING

<i>Swim to Win</i>	WEEKS 1, 9, 17	WEEKS 2, 10, 18	WEEKS 3, 11, 19	WEEKS 4, 12, 20	WEEKS 5, 13, 21	WEEKS 6, 14, 22	WEEKS 7, 15, 23	WEEKS 8, 16, 24
Session 1	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP
	50-METER TIME TRIAL	50-METER TIME TRIAL	50-METER TIME TRIAL	50-METER TIME TRIAL	50-METER TIME TRIAL	50-METER TIME TRIAL	50-METER TIME TRIAL	50-METER TIME TRIAL
	SPRINTS 20 x 25M ON :60	SPRINTS 20 x 25M ON :60	SPRINTS 20 x 25M ON :60	SPRINTS 20 x 25M ON :60	SPRINTS 20 x 25M ON :60	SPRINTS 20 x 25M ON :60	SPRINTS 20 x 25M ON :60	SPRINTS 20 x 25M ON :60
	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN
Session 2	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP
	90% 20 x 50M ON :60	90% 10 x 100M ON 2:00	90% 15 x 75M ON 1:30	100% 10 X 50M ON 2:00	90% 20 x 50M ON :60	90% 10 x 100M ON 2:00	90% 15 x 75M ON 1:30	90% 40 X 25M ON :30
	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN
Session 3	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP	WARMUP
	90% 40 X 25M ON :30	90% 40 X 25M ON :30	90% 40 X 25M ON :30	90% 40 X 25M ON :30	90% 40 X 25M ON :30	90% 40 X 25M ON :30	90% 40 X 25M ON :30	100% 10 X 50M ON 4:00
	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN	COOLDOWN
TOTALS								

Warm up - 200 meters easy plus stroke drills; Cool down - 200 meters easy

SWIMMING DIARY

WEEK ____ DATES _____

SESSION	DATE TIME	LOCATION	WORKOUT	MENTAL	PHYSICAL	OTHER

Swim to Win

Section 9

Marksmanship Overview

Marksmanship makes up 2 of the 5 events (40%) of Military Pentathlon. Yet, it's often the most neglected of the training processes during the off-season. This seems ironic because, of all the training activities on the off-season training schedule, marksmanship training requires the least amount energy, and it can be done effectively using the least amount of time. For example, while we recommend that you run 4-5 times a week, swim 3 times a week, and lift weights 3 times a week, we recommend that you merely shoot the rifle and pistol once a week for thirty minutes. Shooting 5-6 times a week for 5 minutes would be better, which can be accomplished with relative ease using a pellet gun and a target 10 meters away. An Olympic medalist on our staff recently said that the key to her success was shooting 5 rounds out of a pellet gun in her garage every night before she sent to bed.

It is important to realize that if you are a poor shooter, the chances of your making this team are very slim regardless of your performances in the other areas. But also, if you are an average shooter—enough to get you on the team—and remain average, you will not win a gold medal in Military Pentathlon. If you want to be a champion, you need to become an excellent shooter.

In competition, you will shoot the standard side arm of the host country for the pistol match, and the standard infantry rifle of the host country for the rifle match. The courses of fire for these marksmanship matches follow.

RIFLE MATCH

1. Precision Phase (Slow Fire): This phase consists of firing 1 string of 9 rounds fired at a 300-meter precision bull target in 5 minutes from 1 magazine.
2. Rapid Fire Phase: This phase consists of firing 1 string of 9 rounds fired at 3 silhouette targets in a time of 1 minute from 1 magazine.
3. Position and Range Distance: Rifle shooting is done in the prone position at a distance of 200 meters.

PISTOL MATCH

1. Precision Phase (Slow Fire): This phase consists of firing 9 rounds in 2 separate strings at a precision bull target, each with a time limit of 60 seconds.
2. Rapid Fire Phase: This phase consists of firing 9 rounds at 3 silhouette targets within 35 seconds to include a magazine change during the course of fire.
3. Position and Range Distance: All pistol shooting is done in the standing unsupported position using a two-hand grip at a distance of 25 meters.

HOW TO TRAIN

Recommendations on how to train for the rifle and pistol competition are provided in the next two sections of this manual. The information provided is brief, but enough to inform you about the basic fundamentals of marksmanship that you need to learn and master. The best advice is to find a qualified rifle and pistol coach to expound upon the information provided in the next 2 sections, then have him or her demonstrate for you these principles and coach you until you have acquired the ability to subconsciously shoot a good shot consistently.

Further, sample rifle and pistol marksmanship diary sheets are provided at the end of the next two sections. Recommend that you complete a diary entry after every practice. Your marksmanship coaches will review your diaries when you arrive to Fort Sam Houston.

“The human body will become more precise through
the controlled repetition of a thought or movement.”

MARKSMANSHIP TRAINING

<i>Shoot to Win</i>	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8
RIFLE Date Routine								
PISTOL Date Routine								

<i>Shoot to Win</i>	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14	WEEK 15	WEEK 16
RIFLE Date Routine								
PISTOL Date Routine								

<i>Shoot to Win</i>	WEEK 17	WEEK 18	WEEK 19	WEEK 20	WEEK 21	WEEK 22	WEEK 23	WEEK 24
RIFLE Date Routine								
PISTOL Date Routine								

Section 11

Rifle Training

TRAINING

Shoot a minimum of 1 course of fire per week consisting of 2 sighter rounds plus 10 shots for record. Shooting 5 shots per day is optimal.

RECOMMENDED EQUIPMENT

Weapon: Daisy Model 853 cal .177 Target Pellet Rifle; cost \$175.00.

Target: AR-5/1; AR-5/5; or AR-5/10. These are 10-Meter Air Rifle Targets which may be obtained a variety store, else use the targets at the end of this section.

DEVELOP A SYSTEMATIC ROUTINE

Marksmanship skills can be improved by developing a system that generates maximum control and confidence. It is imperative to follow an unchanging sequence of events that includes all of the factors needed to establish a workable system to deliver a good shot.

BASIC FUNDAMENTALS

1. **SUPPORT:** Positions are designed as a foundation for the rifle. If the shooter is right handed, the left arm and the left leg should be as much in line with the target as possible. This puts maximum body weight behind the weapon.
2. **SIGHT ALIGNMENT:** For correct sight alignment, the eye must be placed directly in line with the center of the rear sight and focused on the front sight post. Settle in to your natural point of aim by closing your eyes, relaxing, and then adjusting your body after opening your eyes until the front and rear sights once again align on the center of the target. Repeat this process again if necessary until the sights remained aligned on the target after you open your eyes. When this occurs, you will be in your natural point of aim—i.e., you will not be “muscling” the weapon to the target, but instead will be naturally aligned with it—which can be thought of as being able to hit the bulls eye with your actually closed. When you are in your natural point of aim, if you relax and close your eyes, *nothing* moves.
3. **SIGHT PICTURE:** The sight picture includes 2 basic elements; sight alignment and placement of the aiming point. A correct sight picture has the target, front sight post, and rear sight aligned.
4. **THE DOMINANT EYE:** It is critical to fire from the same side of the body of the dominant eye. To determine your dominant eye, while focusing your eyes on an

object 10-15 in front of you such as a light switch, extend your right arm straight out and raise your right thumb so that it points to the object. While continuing to focus your eyes on the object—not your thumb—close your left eye. If your thumb is still pointing at the object, you are “Right Eye” dominant. If your thumb appears to be to the left of the object when you close your left eye, you are “Left Eye” dominant.

5. **TRIGGER CONTROL:** This is the application of continuous, uninterrupted pressure on the trigger until it is against the stop while maintaining the correct sight alignment.
6. **FOLLOW THROUGH:** The marksmanship fundamentals used to fire the rifle must continue without interruption until the front sight has settled back to the aiming point on the target.

THE SHOT SEQUENCE THAT DELIVERS A GOOD SHOT

1. Take a breath and exhale normally, then stop breathing. You must stay relaxed.
2. Immediately pull the slack out of the trigger, and exert a small amount of pressure on the trigger. You must stay relaxed.
3. Take one second to stabilize the front sight. You should also use this time to refine the sight picture. You must stay relaxed.
4. Then add continuous pressure to bring the trigger against the stop as quickly as possible maintaining stability of the front sight. You must stay relaxed.
5. Continue to hold the trigger against the stop until the front sight has settled back to the aiming point on the target. You must stay relaxed.
6. Take a breath, releasing the trigger as you inhale. You must stay relaxed.

THINGS TO REMEMBER

1. You must stay relaxed through this entire process.
2. You must focus on the front sight through this entire process.
3. Each time the rifle fires, it must be a surprise.
4. You must breathe between each shot.

10 METER AIR RIFLE TARGET

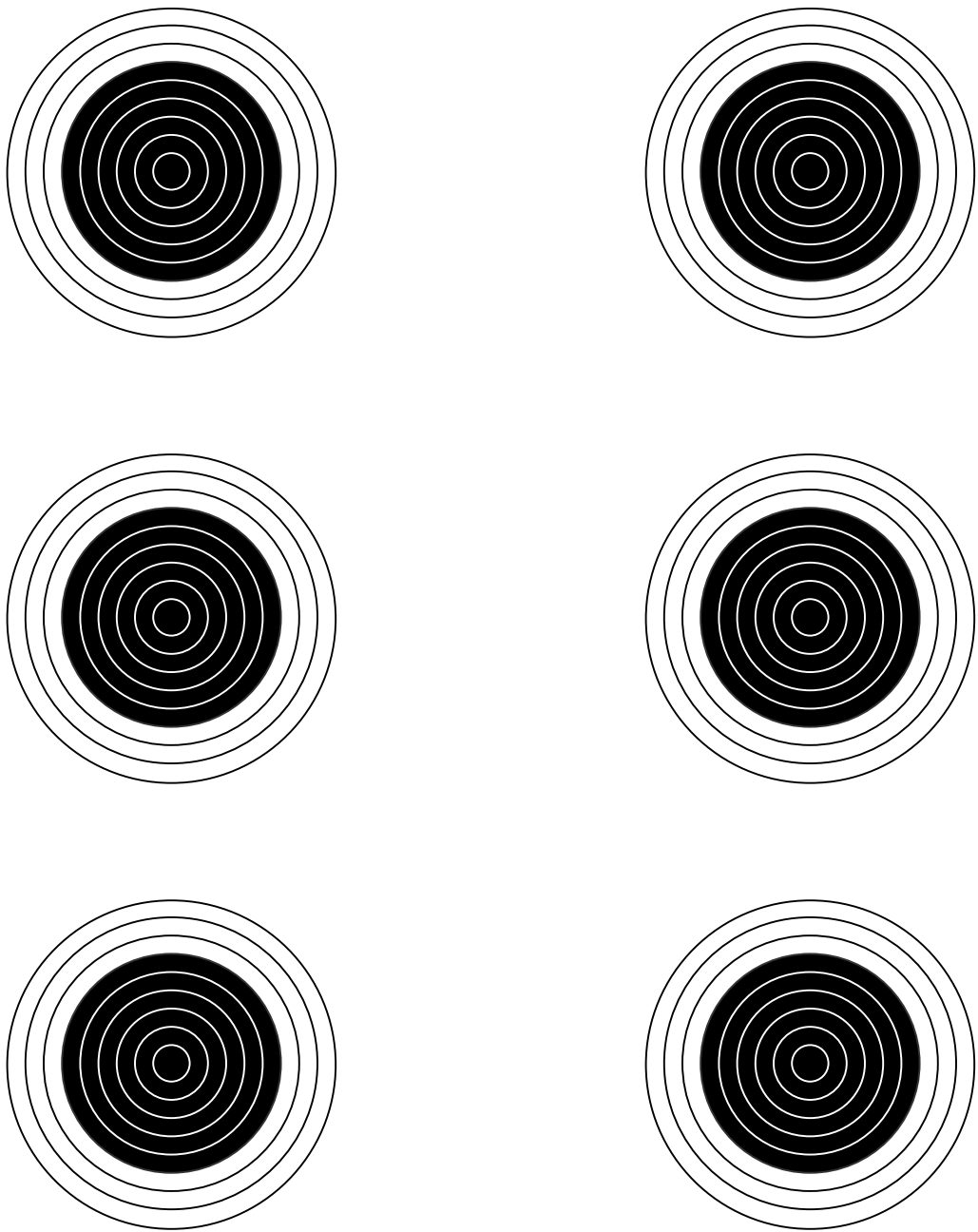
Instructions

- 1. Set up 2 target sheets in order to display 12 circular bulls.
- 2. Shoot 2 sighter rounds on 2 separate bulls (1 shot per bull).
- 3. Shoot 10 rounds for score (1 round on each of the remaining 10 bulls).

Date: _____

Score: _____
(10 Shots)

INSIDE OF OR TOUCHING OUTER RING is 1 Point
TOUCHING INNER RING is 9 Points
INSIDE OF INNER RING WITHOUT TOUCHING (DEAD CENTER) is 10 Points



RIFLE SHOOTING DIARY

LOCATION	EVENT
WEATHER	LIGHT
TIME LAST ATE	DIET
START/END TIME	GUN/SERIAL #
INSTRUCTOR	SHOOTING BUDDY

DIARY (Course of fire, conditions, attitude, achievements)

POSITIVE (KEEP DOING)	THINGS TO IMPROVE OR CHANGE NEXT TIME

SOLUTION ANALYSIS (Discoveries)

GOAL STATEMENT FOR NEXT PRACTICE (First Person Present Tense)

Section 11

Pistol Marksmanship Training

TRAINING

Shoot a minimum of 1 course of fire per week consisting of 2 sighter rounds plus 10 shots for record. Shooting 5 shots per day is optimal.

RECOMMENDED EQUIPMENT

Weapon: Daisy Model 747 match quality .177 caliber pellet pistol.

Target: NRA 10 Meter Air Pistol Target (B-40) which may be obtained a variety store, else use the targets at the end of this section.

THE FOUR BASIC FUNDAMENTALS

1. **Minimum Arc of Movement** –this aids the shooter to develop a steady hold. It is composed of the following four factors:
 - a. **STANCE** - the posture of the body and distribution of weight.
 - b. **POSITION** – You must find and maintain your Natural Point of Aim which is the relationship of your body stance and position relative to the center mass of the aiming area (target).
 - c. **GRIP** – (use a two-handed grip) – The grip must be uniform from shot to shot. The proper grip will give you a natural sight alignment, plus allow you to keep control of the pistol.
 - d. **BREATH CONTROL** – The objective of breath control is to remove any need to breathe while firing a shot or a string of shots (rapid fire).
2. **Sight Alignment and Sight Picture** – (Determine and Use the Dominate Eye)
 - a. **SIGHT ALIGNMENT** – The proper relationship of the front sight to the rear sight notch as viewed with the shooter's dominate eye. Settle in to your natural point of aim.
 - b. **SIGHT PICTURE** - The proper relationship of correct sight alignment with the target center of mass.
3. **Trigger Control** - The application of continuous, uninterrupted pressure on the trigger without disturbing the correct sight alignment, while accepting the **Wobble**, until the pistol fires giving you a Surprise Shot.

4. **Follow Through** – Continue to apply all the fundamentals even after the pistol fires. During the firing of the pistol, you **must stay locked** in position, keeping your arm and wrist locked, and not relaxing too soon.

DEVELOP A SYSYEMATIC ROUTINE

Marksmanship skills can be improved by developing a system that generates maximum control, and confidence. It is imperative to follow an “unchanging sequence” of events that includes all of the factors needed to establish a workable system to deliver a good shot.

THE SHOT SEQUENCE THAT DELIVERS A GOOD SHOT

1. Settle into Your Aiming Area Accepting your Minimum Arc of Movement (Wobble).
2. Start Positive uninterrupted trigger pressure in conjunction with correct sight alignment, and good breath control (all 3 items must be put in to operation at the same time, with all of your conscious mind focusing totally on maintaining correct sight alignment until the shot breaks). Stay locked in position during recoil and immediately pick up the sight alignment for the next shot.

10 METER AIR PISTOL TARGET

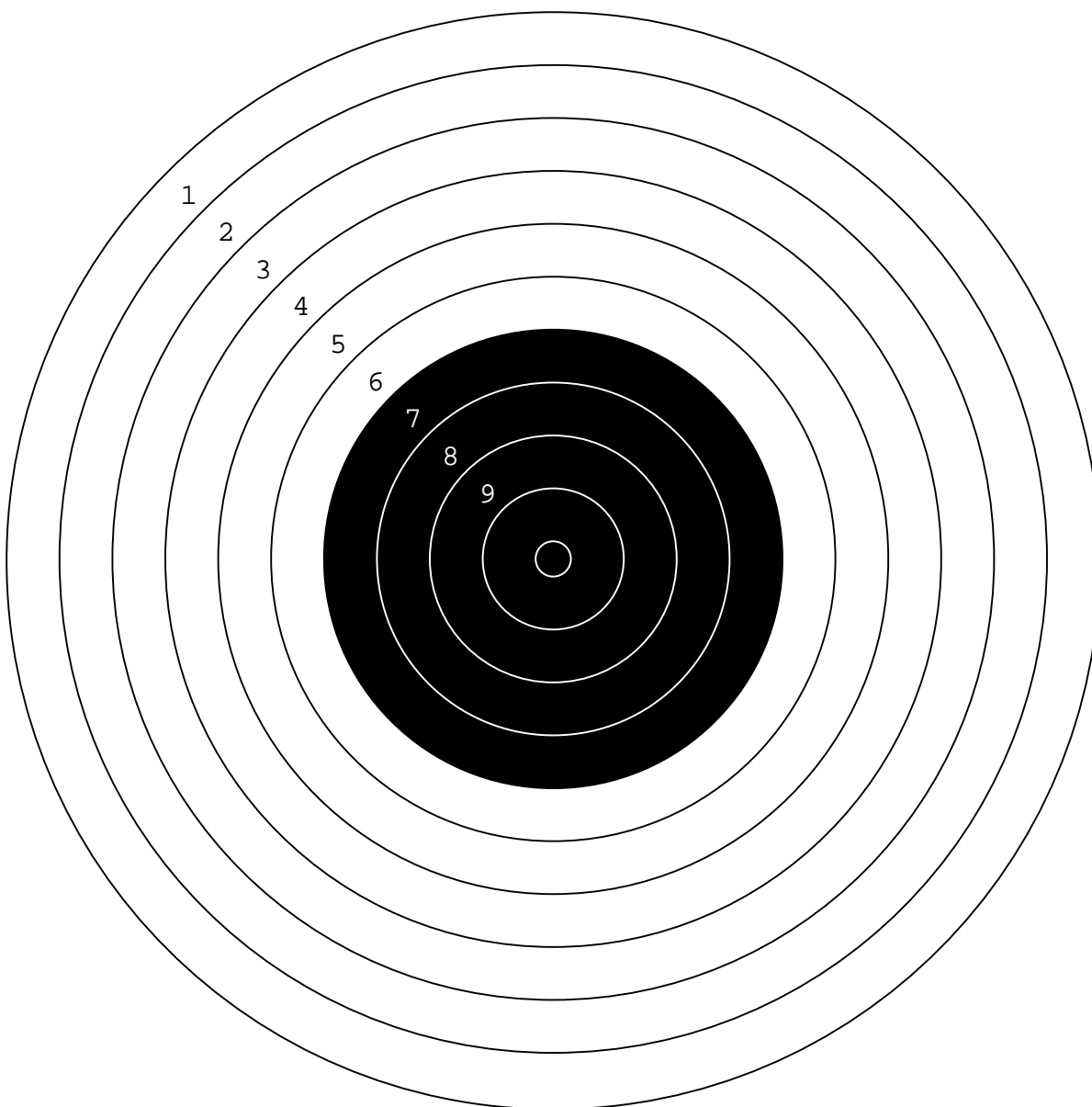
Instructions

1. Set up 2 targets.
2. Shoot 2 sighter rounds on one target.
3. Shoot 10 rounds for score on the other target.

Date: _____

Score: _____
(10-Shot Group)

INSIDE OF OR TOUCHING OUTER RING is 1 Point
INSIDE OF OR TOUCHING CENTER RING IS "X"
INSIDE OF OR TOUCHING SECOND TO CENTER RING is 10 Points



PISTOL SHOOTING DIARY

LOCATION	EVENT
WEATHER	LIGHT
TIME LAST ATE	DIET
START/END TIME	GUN/SERIAL #
INSTRUCTOR	SHOOTING BUDDY

DIARY (Course of fire, conditions, attitude, achievements)

POSITIVE (KEEP DOING)	THINGS TO IMPROVE OR CHANGE NEXT TIME

SOLUTION ANALYSIS (Discoveries)

GOAL STATEMENT FOR NEXT PRACTICE (First Person Present Tense)

Section 12

Strength Training

The strength program used in Military Pentathlon is designed to develop all of the muscle groups in your body in balanced proportions. Although avid weight lifters may lift up to 6 days a week—their upper body 3 days, for example, and their lower body 3 days—we recommend that you lift only 3 times per week, and work every muscle group during each workout. Weight training is important, yet too much of it leads to a point of diminishing returns, thus your time can be spent better elsewhere. Your goal in the weight room is to build practical and useful strength and endurance, not aesthetic mass. Mass will in fact slow you down. Your goal is to build tone, strength, and fluidity for better performance. Thus, strength training is a critical part of your training schedule with high pay off dividends on the Land and Water Obstacle Courses. Don't neglect it, but don't overdo it.

Your strength training program includes strength development phases—heavier weight with fewer repetitions—as well as muscle endurance phases where you will be using lighter weights but doing more repetitions. A third phase takes the middle road. Unless time constraints simply leave you with no other choice, schedule your weight workouts after your running and swimming workouts, else assure you have several hours of recovery time after a weight work out before running or swimming. The reasoning is that weight training for Military Pentathlon is classified as secondary training—it's a noncompetitive activity in this program—which means it is done simply to enhance performance in the primary training events, the events you compete in—running and swimming. A rule of thumb, then, is this: If a time constraint requires you to drop a work out on any given day, drop the secondary training work out. Your weight lifting capability will not be evaluated in this program at any time. Your running/orienteering, swimming, and marksmanship ability is what will get you on the team. Conduct your weight training program with this in mind.

EQUIPMENT

Whether you use free weights, Nautilus, Universal, or other equipment can be argued either way. Use what you are comfortable using. However, the use of machines does not require a spotter, and you can generally move more quickly between stations because you can set the weight on a machine more quickly than you can on barbells. Further, the endurance/aerobic weight workouts on the training schedule normally can not be done practically with barbells unless you have the gym to yourself, and your spotter presets the weights on all the stations enabling you to move quickly from one to another. From this perspective, machines have advantages over free weights.

The forms that follow on the next several pages are self-explanatory. Your **Strength Training Diary** should be completed at home after your work out while the **Strength Training Log** goes with you to the gym and is completed as you go through the workout. Recommend printing your training logs on durable paper for gym use.

If you are not familiar with *correct* weight training, we recommend that you seek the advice of a Certified Fitness Trainer, an Army Master Fitness Trainer, or a strength training coach to assure you are lifting correctly. Keep in mind that lifting heavier amounts of weight incorrectly will not achieve as favorable results as lifting lighter amounts of weight the right way. The “Smarter, not Harder” rule applies.

THE RIGHT AMOUNT OF WEIGHT

Determining what amount of weight to use can take several visits to the gym. What you are seeking to accomplish, however, is to select an amount of weight that, when lifting it correctly, leaves you with no remaining energy in the muscle group you are working after the last repetition has been completed. If your schedule calls for 8 repetitions, for example, your 8th repetition should be a tremendous struggle, and a 9th repetition would be impossible. A rule of thumb to get started is to perform a “maximum one” repetition on each station. In other words, for the bench press, determine the maximum amount of weight you can bench press one time by experimenting with the weight. Then take 65% of that amount and start with weight this as your workout weight for that particular station. If this weight proves to be too light or too heavy, then make minor adjustments until you find the correct amount of weight.

Use this same procedure with all of the other smaller muscle groups, i.e., your upper body. For the larger muscle groups—your legs—start out at 75% of your “maximum one” repetition ability. Again, these percentages are only rules of thumb to help you determine your optional work out weight more quickly. Adjustments will normally be required at every station. Further experimenting will be required when you transition from your heavy weight/low repetition workouts to your light weight/high repetition workouts. Recommend that you have all of this figured out and under control prior to starting your 24-week program.

SEQUENCE AND SECONDS PER REPETITION

Lift with your larger muscles first. Many of your smaller muscles serve as assistants to your larger muscles. Thus, if you deplete the energy in your smaller muscles it will adversely affect your ability to work out your larger muscles at their maximum capacity. The correct sequence of stations is shown on the **Strength Training Log** provided in this section. Also, the longer the time period you spend completing 1 repetition, the greater amount of strength you will gain. This is due the fact that more muscle fiber is being harnessed for a longer period of time. You will also note that some sessions will require you to complete 1 repetition in 2 seconds while other sessions will require 16 seconds per rep. This is because some sessions are designed to increase your muscular strength while others are designed to increase muscular endurance. Follow the guidance carefully. Every work out has its own unique and important purpose in the larger realm of systemic training.

STRENGTH TRAINING

<i>Lift to Win</i>	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8
# DATE W/O	1 _____ 8M 8/8	4 _____ 8H 2/4	7 _____ 12M 8/8	10 _____ 12H 2/4	13 _____ 8H 2/4	16 _____ 10H 2/4	19 _____ 12H 2/4	22 _____ 12H 2/4
# DATE W/O	2 _____ 10M 8/8	5 _____ 10H 2/4	8 _____ 12M 8/8	11 _____ 12H 2/4	14 _____ 15M 1/1	17 _____ 15M 1/1	20 _____ 15M 1/1	23 _____ 15M 1/1
# DATE W/O	3 _____ 12M 8/8	6 _____ 12H 2/4	9 _____ 12M 8/8	12 _____ 12H 2/4	15 _____ 30L 1/1	18 _____ 30L 1/1	21 _____ 30L 1/1	24 _____ 30L 1/1
<i>Lift to Win</i>	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14	WEEK 15	WEEK 16
# DATE W/O	25 _____ 8M 8/8	28 _____ 8H 2/4	31 _____ 12M 8/8	34 _____ 12H 2/4	37 _____ 8H 2/4	40 _____ 10H 2/4	43 _____ 12H 2/4	46 _____ 12H 2/4
# DATE W/O	26 _____ 10M 8/8	29 _____ 10H 2/4	32 _____ 12M 8/8	35 _____ 12H 2/4	38 _____ 15M 1/1	41 _____ 15M 1/1	44 _____ 15M 1/1	47 _____ 15M 1/1
# DATE W/O	27 _____ 12M 8/8	30 _____ 12H 2/4	33 _____ 12M 8/8	36 _____ 12H 2/4	39 _____ 30L 1/1	42 _____ 30L 1/1	45 _____ 30L 1/1	48 _____ 30L 1/1
<i>Lift to Win</i>	WEEK 17	WEEK 18	WEEK 19	WEEK 20	WEEK 21	WEEK 22	WEEK 23	WEEK 24
# DATE W/O	49 _____ 8M 8/8	52 _____ 8H 2/4	55 _____ 12M 8/8	58 _____ 12H 2/4	61 _____ 8H 2/4	64 _____ 10H 2/4	67 _____ 12H 2/4	70 _____ 12H 2/4
# DATE W/O	50 _____ 10M 8/8	53 _____ 10H 2/4	56 _____ 12M 8/8	59 _____ 12H 2/4	62 _____ 15M 1/1	65 _____ 15H 1/1	68 _____ 15M 1/1	71 _____ 15M 1/1
# DATE W/O	51 _____ 12M 8/8	54 _____ 12H 2/4	57 _____ 12M 8/8	60 _____ 12H 2/4	63 _____ 30L 1/1	66 _____ 30L 1/1	69 _____ 30L 1/1	72 _____ 30L 1/1

STRENGTH TRAINING OVERVIEW

<u>Purpose</u>	<u>Weight</u>	<u>Reps</u>	<u>Work Per Rep (seconds)</u>
increase muscular strength	heavy weight	8-12 reps	2/4 positive/negative
increase muscular endurance	light weight	8-12 reps	8/8 positive/negative
increase speed and quickness	medium weight	15 reps	1/1 positive/negative
increase anaerobic tolerance	light weight	30 reps	1/1 positive/negative

LEGEND

<i>Lift to Win</i>	WEEK 1
# DATE W/O	1 _____ 8M 8/8

Lift to Win This is why you are training.

Work out session number (3 sessions per week for 8 weeks is 24 sessions per phase)

1 _____ Write in the date of work out beside the scheduled work out number.

W/O Work out description; 8M 8/8 is 8 reps of medium weight, 8 seconds pushing out followed by 8 seconds to return to starting position; L → Light weight; M → Medium weight; H → Heavy weight. An 8M 8/8 set takes 8 x 16 seconds or 128 seconds to complete. Do one set only at each station for all workouts. Hustle quickly to the next station; no rest.

Train to Win

STRENGTH TRAINING DIARY

SESSION	DATE	LOCATION	WORKOUT	MENTAL	PHYSICAL	OTHER
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

Lift to Win

STRENGTH TRAINING DIARY

SESSION	DATE	LOCATION	WORKOUT	MENTAL	PHYSICAL	OTHER
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Lift to Win

STRENGTH TRAINING DIARY

SESSION	DATE	LOCATION	WORKOUT	MENTAL	PHYSICAL	OTHER
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						

Lift to Win

STRENGTH TRAINING DIARY

SESSION	DATE	LOCATION	WORKOUT	MENTAL	PHYSICAL	OTHER
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						

Lift to Win

STRENGTH TRAINING DIARY

SESSION	DATE	LOCATION	WORKOUT	MENTAL	PHYSICAL	OTHER
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						

Lift to Win

STRENGTH TRAINING DIARY

SESSION	DATE	LOCATION	WORKOUT	MENTAL	PHYSICAL	OTHER
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						

Lift to Win

STRENGTH TRAINING LOG

WORKOUT	#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
<i>Lift to Win</i>	DATE																								
1 LEG CURL	WT REP																								
2 LEG PRESS	WT REP																								
3 LEG EXT	WT REP																								
4 ABDUCTION	WT REP																								
5 ADDUCTION	WT REP																								
6 PULLOVER	WT REP																								
7 TORSO	WT REP																								
8 FLIES	WT REP																								
9 BENCH	WT REP																								
10 BICEPTS	WT REP																								
11 SEATED DIP	WT REP																								
12 ABDOMINAL	WT REP																								
13 CALVES	WT REP																								
14 PUSHUPS	REPS																								
15 CRUNCHES	REPS																								
16 PULLUPS	REPS																								
17 DIPS	REPS																								

STRENGTH TRAINING LOG

WORKOUT	#	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
<i>Lift to Win</i>	DATE																								
1 LEG CURL	WT REP																								
2 LEG PRESS	WT REP																								
3 LEG EXT	WT REP																								
4 ABDUCTION	WT REP																								
5 ADDUCTION	WT REP																								
6 PULLOVER	WT REP																								
7 TORSO	WT REP																								
8 FLIES	WT REP																								
9 BENCH	WT REP																								
10 BICEPTS	WT REP																								
11 SEATED DIP	WT REP																								
12ABDOMINAL	WT REP																								
13 CALVES	WT REP																								
14 PUSHUPS	REPS																								
15 CRUNCHES	REPS																								
16 PULLUPS	REPS																								
17 DIPS	REPS																								

STRENGTH TRAINING LOG

WORKOUT	#	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
<i>Lift to Win</i>	DATE																								
1 LEG CURL	WT REP																								
2 LEG PRESS	WT REP																								
3 LEG EXT	WT REP																								
4 ABDUCTION	WT REP																								
5 ADDUCTION	WT REP																								
6 PULLOVER	WT REP																								
7 TORSO	WT REP																								
8 FLIES	WT REP																								
9 BENCH	WT REP																								
10 BICEPTS	WT REP																								
11 SEATED DIP	WT REP																								
12ABDOMINAL	WT REP																								
13 CALVES	WT REP																								
14 PUSHUPS	REPS																								
15 CRUNCHES	REPS																								
16 PULLUPS	REPS																								
17 DIPS	REPS																								

Section 13

Flexibility Training

Flexibility is an extremely important training process that you must regard as individual practice sessions, ones that you would not miss any more than running or swimming practices.

Good flexibility not only increases your range of motion which elevates your performance with less effort, it also increases blood circulation and reduces your chances of becoming injured.

There are two types of stretching sessions to include in our training program which have two distinct purposes:

- Warm Up/Cool Down stretching
- Flexibility Improvement (Conditioning) stretching

WARM UP AND COOL DOWN STRETCHING

Warm up stretching is conducted before training sessions to relax the muscles for increased range of motion and to prevent injury during training. Cool down stretching is conducted at the end of the training period after your heart rate has dropped to 100 bpm. The purpose of cool down stretching is to prevent the onset of muscle tightening—reduced flexibility—and soreness.

Both sessions are to be preceded by a slow 5-minute jog (800 meters).

For warm and cool down stretching, stretch your muscles in the sequence prescribed in the table at the end of this section. Hold each stretch for 12 seconds. The entire routine including your warm-up jog will take 20-25 minutes to complete.

ASSESSING YOUR FLEXIBILITY

To measure your current level of flexibility, use the sit and reach method described below. If your flexibility is less than excellent, we strongly recommended that you work conscientiously to improve. If your flexibility is poor, your performance will be hindered significantly and your chances of injury in this program will increase. If this is the case for you, you should incorporate at least 2 conditioning stretching session per week in to your training schedule. If you arrive to Fort Sam Houston with poor flexibility—your flexibility will be measured on the second day of training camp—what little free time you may have in the evenings will be spent in remedial stretching sessions administered by the athletic trainer.

The Sit and Reach Flexibility Assessment:

Equipment:

- A yard stick
- Tape to keep the yardstick in place on the floor

Protocol:

- Jog ½ mile (5 minutes)
- Stretch
- Restrain from fast jerky movements when tested
- Should be barefooted or in socks

Use of yardstick:

- Place on the floor with tape placed across it at right angles at the 15-inch mark.
- Sit so that the yardstick is placed between the legs with the heels resting on the 15-inch mark on the tape; feet should be 5-10 inches apart.
- Slowly reach forward with both hands as far as possible on the yard stick and hold that position.
- A partner's feet should brace against your feet during the reach so that your heels will not slip over the 15-inch line.
- Record the farthest distance reached in 3 tries to the nearest inch.

Flexibility Assessment Classification:

FLEXIBILITY ASSESSMENT Yard-Stick Method	
Fitness Category	Inches Reached
Excellent	22" or more
Good	19-21"
Fair	14-18"
Poor	12-13"
Very Poor	11" or less

FLEXIBILITY IMPROVEMENT

Warm up and cool down stretching prepares the body for physical exercise and prevents soreness, but these shortly-held stretches do not improve flexibility. To improve flexibility, the stretches must be held longer and should not be done either prior to or after a work out. These sessions, which you should do at least once a week even if you already have excellent flexibility, are to be done as ends in themselves, perhaps on a Sunday afternoon, along with a goal and diary review when no physical training is schedule for that day.

To improve your flexibility, follow the same sequence of stretches for your warm up and cool down sessions, but hold each stretch for one minute. Thus, a Conditioning Stretching session including your warm-up jog will take 50-55 minutes to complete.

HOW TO STRETCH

Proper stretching is done in a relaxed state, a state you can get in to by following the relaxation drill described in the next session of this manual (Section 14—Mental Training). When stretching extend to the point of mild discomfort, than immediately reduce the amount of tension to where you are comfortable, and hold the stretch for the duration recommended above (12 seconds for warm up and cool down stretches and 1 minute for conditioning stretches). Breathe naturally and visualize the muscle you are stretching, focusing on the intent of the stretch, and imagine that muscle relaxing and lengthening as you stretch it. Thus, when stretching, you should be relaxed, but mentally focused on what you are doing in an environment where you will not be distracted.

The following sequence of stretches we use at Fort Sam Houston during formal team stretching sessions. It is designed to stretch all the muscles used in Military Pentathlon with minimum body movement between stretches. After several sessions, you will be able to go through this routine without any conscious effort, relying on muscle memory and routine to move you from one stretch to another. The names of the stretches below are the commands given during team stretching sessions to signal you to move from one stretch to the next. The routine never varies unless a new stretch is evaluated and added.

#	Name of Stretch	Instructions
1	Reach for the Sky	Stand straight with your feet 8-12 inches apart and raise your arms above your head, reaching for the sky. Extend your arms upward as far as possible and hold "X" seconds depending on whether it is a Warm Up/Cool Down stretch (12 seconds) or a Conditioning stretch (1 minute). Complete the stretch by raising up on your toes for an additional 8 seconds.
2	Right Arm Up	<p>Still standing with your feet apart, leave your right arm straight up toward the sky, and place your left hand around your right elbow (the underside of your left forearm will be resting on the back of your head. Once in this position, lean as far to the left as possible and hold for "X" seconds.</p> <p>Switch by raising your left arm skyward and grabbing your left elbow with your right hand, and then lean to the right.</p>
3	Grab Right Wrist	<p>Still standing with your feet apart, place both hands behind your back. Grab your right wrist with your left hand and pull your right hand behind your back to the edge of your left waist. Tilt your head to the left to stretch the muscles in the right side of your neck and hold for "X" seconds.</p> <p>Switch by grabbing your left wrist with your right hand, and repeat in the opposite manner to stretch the muscles in the left side of your neck</p>
4	Right Arm Across	<p>Still standing with your feet apart, place your right hand across your chest and let it rest on your left shoulder. Raise your right elbow until your entire right arm, although bent, is parallel to the ground. Place the palm of your left hand on your right elbow, and pull your right elbow in and to the left side of your chest, allowing your right hand to slide off your left shoulder and extend out beyond the left side of your body as far as possible. Once in this position, hold for "X" seconds.</p> <p>Switch arms and stretch your left arm the same way.</p>

5	Small Circles	Still standing with your feet apart, extend your arms outward so that they are parallel to the ground and pointing east and west if standing north. Rotate your arms in small circles—in a diameter of 6-8 inches—8 times, then reverse the direction of the circular motion and rotate 8 more times.
6	Shake it Out	Still standing with your feet apart, shake your arms and hands at random for 8-12 seconds, freeing up any tension and loosening your joints.
7	Trunk Rolls	Still standing with your feet apart, pull your hands up to either side of the outer part of your chest near your arm pits (right hand to right side and left hand to left side) and rotate the upper part of your body back and forth to your right and to your left at the waist. Continue until you have rotated to your left and to your right 8 times each.
8	Grab Right Ankle	Still standing with your feet apart, raise your right foot behind you and reach back with your left hand and grab your right ankle. With your left hand still holding your right ankle, pull your right heel to your right buttock and hold for "X" seconds. Switch and repeat with your left ankle.
9	Right Foot Forward	Standing with your feet still apart, place the heel of your right foot on the ground 2-3 feet in front of you while letting your left foot turn outward to a comfortable angle. With your right heel on the ground and your right toes pointing upward, keep your right leg straight while attempting to touch your right toes with both hands and your nose to your right knee. When you have reached the limit of this range of motion, hold for "X" seconds. Switch legs.

10	Bend and Reach	Standing with your feet still apart, extend your right foot to the right until your feet are 3-4 feet apart. With your knees slightly bent, lean forward and, with your hands placed together side by side, lower your forehead as closely to the ground as possible while letting your hands go underneath you're your body between your legs to a point on the ground as far behind the imaginary line between your feet as possible. Hold for "X" seconds.
11	Over Left Knee	<p>With your feet still 3-4 feet apart, while assuring both heels remain at the same 2 points on the ground, pivot to your left until your toes and body have moved 90 degrees from a hypothetical north direction to due west. Your body is now facing left with your right toe 3-4 feet directly behind and aligned behind your left heel. Place your left hand on your left knee, and your right hand on the ground 1 foot to the right of your left foot. While moving in to this position, your right heel will naturally elevate off the ground leaving the ball of your right foot as the contact point with the ground.</p> <p>Adjust your right foot slightly to the right so that your right foot is in alignment behind your right hand with as much distance between your right foot and right hand as possible which may require extending your right foot back further. With your left shin perpendicular to the ground, hold for "X" seconds and then lower your right knee slowly so that it touches the ground "X" seconds after the start of the downward movement.</p>
12	To the Side	As soon as your right knee touches the ground in Stretch # 11, place your left hand on the ground between your left foot and right hand and rotate your right foot clockwise so that it is now perpendicular to your left foot which has remained stationary and pointing forward. Both feet, however, are to be <i>flat</i> on the ground. Your nose will be directly above a point on the ground between your left and right hands. Once in this position, allow your left knee to move forward and beyond your left toe until your groin lowers as closely to the ground as possible. When you have reached the limit of your range of motion, hold for

		"X" seconds.
13	Slide	From the end position in Stretch # 12, allow your right foot to turn on its left side while your left knee moves forward even more and closer to the ground while attempting to move your groin as closely as possible to your left heel which has become slightly elevated off the ground. When you have reached limit of your range of motion, hold for "X" seconds.
14	Toes Up	<p>From the end position in Stretch #13, while keeping your right leg straight, use your right heel as a pivot point while rotating your right foot upward until your right toes point to the sky. Allow your groin area to move as closely to your left heel as possible, and hold for "X" seconds.</p> <p>Starting with Stretch # 11, repeat Stretch #'s 10-14 for the other side of your body.</p>
15	Heels In	From the end position in Stretch # 14, ease to the right and downward until your buttocks are on the ground and bring both heels of your feet in toward you so that you are sitting Indian style. Sitting with your back straight up with the flats of your feet pulled together as closely to your groin as possible, allow your knees to fall to either side and lean as far forward as possible at your waist with your back remaining unbent. Grab your feet with your hands to assist you in pulling yourself forward to the limit of your range of motion. Rest your elbows on your knees and push your knees downward. Hold for "X" seconds.
16	Left Foot Out	<p>From the end position in Stretch # 15, while leaving your right foot stationary, extend your left foot directly in front of you so that your left leg is lying flat on the ground. Keeping your back straight, attempt to touch the toes on your left foot with both hands while also attempting to touch your nose to your left knee.</p> <p>When you have reached the limits of your range of motion, hold for "X" seconds.</p> <p>Switch legs.</p>

17	Right Foot Back	<p>From the end position in Stretch # 16, leaving your left leg stationary, swing your right foot around behind you so that your right heel touches your right buttock as your right knee rests gently on the ground. Place your left hand on the ground to the left and behind you, and lower your body back and to the left until your left elbow touches the ground. Hold for "X" seconds.</p> <p>Switch legs.</p>
18	Left Foot Across	<p>From the end position in Stretch # 17, while leaving your right leg stationary, place your left foot over and across your right knee and onto the ground. Twist your torso to the left by placing your right elbow on the outside of your left knee. Rest your left hand on the ground behind your back. Turn your head to the left and push your left knee to the right with your right elbow. Hold for "X" seconds.</p> <p>Switch sides.</p>
19	Team Photo	<p>From the end position in Stretch # 18, lie on your back, and bring your knees to your chest using your arms to pull your knees in as tightly as possible. Hold for "X" seconds.</p>
20	Calf Stretch Right Foot Across	<p>From the end position in Stretch # 19, roll over in to the push up position, and place your right foot over your left ankle. Push your left heel toward the ground as closely as possible, and hold for "X" seconds.</p> <p>Switch feet.</p>
21	Cat Stretch	<p>From the end position in Stretch # 20, go back in to the push up position, and raise your head upward to look at the sky while arching your back downward as far as possible until your legs are flat on the ground up to your groin while your arm remain straight and perpendicular to the ground. Hold for "X" seconds.</p>

22	Stretch Arms	<p>From the end position in Stretch # 21, move to your hands and knees. Placing your hands well in front of you, move your buttocks backward until they rest on your heels, and lower your chest to the ground with arms extended in front of you as far as possible. Hold for "X" seconds.</p> <p>Move slowly to the standing position. Your stretching routing is complete.</p>
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Section 14

Mental Training

Sports psychology is a serious business in competitive sports worldwide. Boiling it down, if one has the physical ability to excel, it's a matter of what is going on in his or her mind that makes the difference between poor performance and world-class performance, or whether he or she will be willing to accept the challenge to train and compete at all.

The first and most important question to consider in sports psychology is "Why?" Why are you doing this? This question is important because if the *why* is strong enough, you can accomplish about anything. But if the *why* is weak, you will not win here if you make it here at all.

There are excellent books available on mental training. Presented in the following discussion, however, are the basics we teach during our training camps at Fort Sam Houston.

VOLITION

Many of the techniques used in sports psychology today were developed after interviewing survivors of the Holocaust of World War II. The atrocities placed upon these people in Nazi death camps required extraordinary will to overcome the odds to survive. This type of will power is what is referred to in sports psychology as one's volition, what athletes must find within themselves to endure the countless hours of training and achieve super human results in competition.

The human mind is complex, and no two are alike. Our motivations and images of ourselves today are the accumulated effects of our experiences and teachings that started the day we were born. Some will argue that it actually started in the womb. Thus, what may inspire one person to pursue a challenge may not be found in the heart of another. What inspires you is unique, and thus it must be known and understood by you.

To assist you in learning more about your own volition is a method called clustering, which is designed to explore events in your past that affect your volition when pursuing a specific goal.

An example of a cluster made by a former Military Pentathlete (shown on the following page) was created using the following guidelines:

1. Recall an event that you performed exceptionally well in. Write this event down on in the center of the page provided and circle it.
2. Sit comfortably, close your eyes, and relive the moment in vivid detail: thoughts; sights; sounds; smells; voices; feelings; emotions. Write these thoughts down, circle them, and join them to the center circle with a line.
3. Expand your thoughts to include associated events in your life connected to this event: books; movies; a girlfriend; a conversation with your grandfather. Write these down as well, circle them and join them to the growing cluster.
4. Write down any deliberate actions you took to compete well: pre-event meal; equipment; training partner; music you listened to. Add these to the cluster.
5. Review the cluster you have created and look for associations that you may have never considered, yet, when looking back, you can see interconnected activities that led you to increased strength and confidence in yourself.
6. Write down in one sentence why you want to try out for this team.
7. Write down what you think you will get from this experience.
8. Ask yourself if these rewards will be worth the sacrifice. If yes, read on.



SAMPLE VOLITION CLUSTER



VOLITION

Create your own cluster in the space below to help you discover and understand your own paths of experience and volition.

CREATING AND ASSESSING YOUR GOALS

Bringing good things in to your life begins by envisioning them, and then working in a worthy and logical way to make them happen. Analyzing your goals to move beyond a dream to reality begins by asking your self “Why am I doing this?” Below is an example of what one might write down as reasons for wanting to participate in Military Pentathlon.

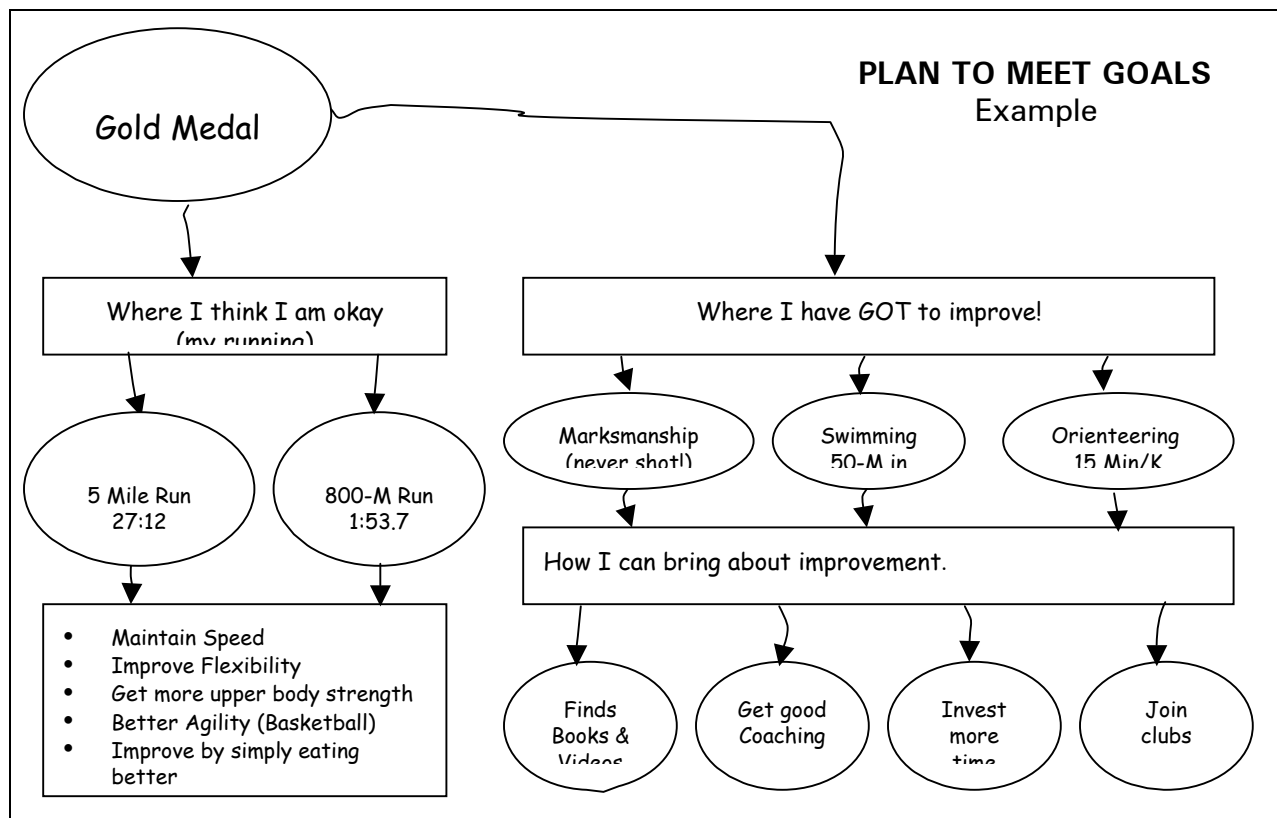
Overall Goal: To Make the U.S. Team and Win a Gold Medal				
Personal	Professional	Financial	Social	Physical
1. I want a worthwhile challenge	1. This will set me a part in my unit in a good and unique way.	1. As a student, this would be the best paying summer job I can find.	1. I would like to be part of a U.S. Team	1. I am eager to get in the best shape of my life.
2. I have always dreamed of competing internationally	2. This will be recognized where I work.	2. The more time I spend training, the less time I spend blowing money.	2. I would like to make friends from all over the country.	2. I want to learn more about how to take better care of myself.
3. I want to have an exciting goal in my life	3. I can apply what I learn from this in the Boy Scout unit I run.	3. This is my stepping stone to Olympic competition.	3. I would like to make friends internationally.	3. I am curious what my potential really is.
4. I would like to take my family to the competition. This would make my family proud.	4. This experience will help me be a better youth league soccer coach.	4. Having this experience will be very good on my resume when interviewing for a job.	4. I like the idea of having teammates to work hard with and accomplish something good.	4. I want to push myself to the limits, to see what that feels like.
5. I am eager for diversion and to learn more about myself	5. My civilian company may be recognized for this.	5. With this experience, I can work part time as a fitness trainer.	5. I'm eager to learn about the country we will be competing in.	5. I want to find out what it takes to be a champion.

In the table provided on the next page, create your own headings in the top row and then write your strongest feelings about them in the spaces beneath each heading. When finished, circle the highest priority in each column. You will now have 5 priority *Why's* circled, one from each heading. Then visit the **TRAINING GOALS** form in Section 1 (page 5) and revise, if necessary, what you wrote in the 5 spaces at the bottom right part of the page under the heading “*Why am I Doing This?*” Sign the dotted line again if necessary in order to make a contract with yourself that this is a goal that you are going to fully commit to.

<p style="text-align: center;">GOAL ASSESSMENT <i>Why am I doing this?</i></p>				
<p>Overall goal:</p>				

CREATING YOUR PLAN

After you have recorded your current levels of ability on the **Current Ability** form in Section 4 (page 15), use the results to create your action plan overview of how you are going to about reaching your goal. This action plan will serve as the basic foundation of your training schedule. An example is provided on the next page followed by an exercise to create your own plan.



PLAN TO MEET GOALS

BEYOND GOALS

Goals are exciting and important, yet, burning beneath everyone's fingernails is a thirst for something larger than goals. People thirst to feel a certain purpose in their lives. In the words of Carl Lewis, America's world-renowned sprinting and long jump champion:

"I always had the feeling that I was born to do something... I'm convinced that God has given me the talent, and I'm just being patient and responsible with it."

Distinctly different, then, and further reaching than goals is a wanting of a sense of profound personal mission. And, when one is connected with this mission, worthy goals are spawned from it, goals that when placed together propel one toward ultimately greater things than the goals themselves.

PERSONAL MISSION AND REACHING GOALS

Many people are goal oriented, jumping from one challenge to another. Goals are good; they're a necessary part of an accomplished life. However, after a goal is accomplished, it's good to know there is something waiting on the other side.

Football coaching great Tom Landry once said that the day after the Super Bowl—win or lose—is a tough day because on that day the big goal is behind you and so you've got to pull yourself together and look ahead again.

So what happens the day after the super bowl? Life doesn't stop, but there can be a lull of activity. And during this lull, a person can experience moments of uncertainty about what is to happen next. No one ever said when you've accomplished everything you've set out to do that life would be lived happily ever after. This period of "ever after," the period after we've fulfilled our long sought-after aspirations, is something we are often unprepared for.

Simply, goals are short lived. They are created by our own free will. Personal mission, however, is permanent and, as opposed to being strictly a personal choice, it is often *felt* by people as a calling, something they listened for to discover, and something that generates clear and meaningful goals to accomplish.

THE POWER OF MISSION

Because a mission is greater than a goal, if a person fails at a goal, he or she can gather that failing was for a good reason. Failing, for example, might be regarded as a learning experience that, in time, will propel someone toward completing the same goal at an accelerated rate, else move him or her on to different goals. In this and in any case, significant meaning can come from failure provided the person does not become immobilized and instead looks for the positive.

THE LOGIC OF FAILURE

Consider a young woman who is quick to share that her life mission is to serve as a role model for underprivileged children. And that while in a college fitness class she discovers a remarkable talent: the potential to become a world-class miler. She believes that exploring any newly-discovered talent is not only enjoyable, but a responsibility. So, to determine if her gift as a runner is a mission building block, she creates a bold goal that she believes supports her mission. Her goal is to become an Olympic miler. She unselfishly rationalizes that, with this experience, she will be a more credible role model for children.

With this goal clearly in mind, she moves to the next step and creates a plan, a training schedule.

When she begins her training, because of her strong value system, she delivers faithfully. She makes her practices, eats well, gets enough sleep and recovery time, and performs 100%.

In the end, however, unfortunately she fails. Yet, after the initial disappointment, she doesn't drown in sorrow because she knows her intentions were correct. She believed in a greater mission, a mission that inspired her to create an Olympic dream for a certain reason. Thus, she searches for hidden victories. One might be, for example, that she's now better able to counsel a young boy who has just gotten cut from the football team. Or maybe she will one day, with her now acquired knowledge of running, become an accomplished track coach for underprivileged kids and lead one of *them* to an Olympic dream. Regardless, because of her conviction to make good out of it, she will eventually be able to look back and say, "*Fortunately*, I did NOT qualify for the Olympic team that year."

Thus, when doing the right things for the right reasons, you cannot fail—ever—even if the results are different than what you hoped for or resemble what the rest of the world might call failure. It's just a matter of time until the purpose of the differing results becomes clear. When we believe this and live it, then the bad times, and our failings, can be counted as blessings because at a precise point in the future the "failing" experience will become a means toward a greater end. This outcome depends upon the strength of one's will, the will to search for a way to turn low points into high ones, to turn tragedy into triumph through the defiant power of the human spirit.

The final straw, then, as to whether a setback becomes a victory is a matter of choice. Making the right choice is a product of will, a substance that must be continuously nurtured by values, courage, trust, and patience, and loving something enough that your willing to sacrifice for it. Having a strong sense of mission in life will be the ingredient that helps you keep your head up when it

seems adversity is overtaking you. And having a strong sense of personal mission is what will give you the drive to pursue your goals with a vengeance.

DISCOVERING YOUR MISSION

No two people and the way they experience life are alike. Our gifts, talents, backgrounds and experiences—both good and bad—and the people we have met and been influenced by make us uniquely qualified to contribute to society in a special way. The exercise below will walk you down important roads in your past to help you see more clearly your own uniqueness, and how this understanding of who you are can help you define a greater mission beyond the goals and challenges you choose to accept.

DEVELOPING PERSONAL MISSION
<p>1. Write down what types of activities you enjoy doing most and, beside your entries, write down the feelings (excitement, fear, peace, joy, contentment, etc.) you have when doing them.</p> <ul style="list-style-type: none">•••••
<p>2. Write down the most rewarding experiences you have had in life. Then state how these experiences make you unique, what you learned from them, or how you can use them to help yourself and others in the future.</p> <ul style="list-style-type: none">•••••
<p>3. Write down the most painful experiences you have had in life. Then state how these experiences make you unique, what you learned from them, or how you can use them to help yourself and others in the future.</p>

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4. Write down who you admire most, and why (list their admirable values).

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5. Write down who has influenced you most, and how.

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6. Who looks to you or could possibly look to you for positive influence? How?

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7. What are your strongest natural gifts and developed talents?

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8. What traits do you admire about yourself?

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9. What fears do you have that prevent you from seeking your maximum potential? Where did they come from? What can you do to let them go?

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10. What masks do you wear that cover the real you? Why do you wear them? What can do to place them aside?

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-

11. If a snapshot could be taken to describe your life up to today, briefly place in to words a description of the snapshot. Include how others see you today and whether they see the real you.

12. Assuming you are the artist that paints the picture of your life, briefly describe how you want the picture of your life to look when your life is over. Include how you want others to see you, and if this will be the real you.

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Review what you have written in the exercise above, then write below what you believe, if there could be such a thing, your unique life mission might be.

PERSONAL MISSION STATEMENT

After reviewing this mission, would trying out and competing in Military Pentathlon seem to be a responsible and worthwhile goal for you? How will this experience move you toward your mission, or benefit you or others who look to you for influence? How could even being cut from the team still push you forward? What would be the effect of winning a gold medal? If taking on this challenge for someone or something greater than yourself, who or what might that be? Is it worth it to you to deliver on this?

Lastly, will the gains from this be worth it? If yes, keep this in mind when you train. And if anybody, including yourself, ever asks, "Why are you doing this?" respond back with clarity and precision.

VISUALIZATING YOUR GOALS

At the outset of a tough challenge, a powerful technique to push you through the daunting start up is to envision the final result. Picture yourself at the end of the accomplishment. Picture yourself a year after the accomplishment when all the training that now lies before you will be a memory. How do you want to look back at it all? Will you want to always know that you did your best? Picture team selection day and seeing your name posted on the bulletin board as a member of the U.S. Team. Picture being issued your USA warm up suit. Picture the awards ceremony at the end of the competition and imagine the thrill of accepting a gold medal in a foreign country. Imagine these events in vivid detail and visually expand

them in your mind to the size of a huge movie screen. And whenever a discomforting thought about the process of getting there enters your mind, or the idea of missing a work out tempts you, place those thoughts on a tiny screen beside the larger screen and turn off the smaller screen while focusing on the larger exciting end result. Allow the joyful image of the met goal to overshadow the painful micro processes of getting there. And along the way, constantly ask yourself, "Where am I?" and "How am I doing?" And be able to respond back, with the end result clearly in mind, with the words "I am right on track and I am doing fine."

RELAXATION

Although fear is often used to motivate people to rise above the levels of couch potatoes, peak performance occurs in positive environments where one is relaxed, and where there is no fear. Because of this, the training environment at Fort Sam Houston is positive. If we have to use fear to motivate you do to your best, we will send you home. Here, we only work with people who want to excel, and this means that we often have to actually teach competitors how to relax both mentally and physically which is contrary to some of the "get-fired-up" motivational techniques they have been exposed to in the past. Learning to relax is a learned process that, with enough repetition, can be done on command in any situation.

The following is a simple relaxation exercise to go through before practice and competition or anytime you simply feel a need to relax.

1. Lie on your back and close your eyes.
2. Attempt to relax, both mentally and physically.
3. Inhale through your nose until your lungs are completely filled. This will take about 10 seconds.
4. Hold your breath and tighten every muscle in your body to the maximum extreme. Maintain this state for 10 seconds.
5. Exhale all your held air forcefully through your mouth while simultaneously relaxing your muscles.
6. Repeat this same process for each of the individual muscle groups ranging from head to Toe in the following sequence:
 - Face
 - Shoulders
 - Back
 - Hands and arms
 - Chest
 - Stomach
 - Upper legs
 - Lower legs
 - Feet

7. When finished with this sequence, complete the exercise by once again inhaling and tightening every muscle group in the body (Steps 3 & 4), then exhale and relax.
8. Lie still for one minute.
9. Squeeze your left thigh tightly with your left hand—the exact same spot every time—for 10 seconds.
10. Open your eyes, and slowly take your feet.

MENTAL REHEARSAL

Rehearsing your performance effectively in your mind before the competition dramatically improves your actual performance. Jack Nicklaus refers to this as “going to the movies”. He visually rehearsed in his mind every shot he ever took before actually pulling back his club to take his swing.

When done properly mental rehearsal has the same training effect of a physical rehearsal because the recorder in your brain, called the Reticular Activating System (RAS), can not distinguish the difference between an imagined rehearsal and an actual performance. In this regard, the old saying “You are what you think” takes on new meaning. How you picture yourself is how you will become as a person or how you will perform as an athlete.

Does this mean that while lying in bed at night and mentally rehearsing a sequence of fire at the pistol range has the same practice effect of actually being at the pistol range? The answer is yes.

Imagine the implications of this. Once learning the motor skills involved in the activity you are training for, learning where every foot placement goes, every hand movement, every motion and its reciprocal timing, you can accomplish the same practice result through mental imagery that you can from actually doing it. And this type of practice can be done without fatigue, or the possibility of getting

injured, or over training or, in the case of marksmanship, without having to drive to the range or spend money on ammunition.

In fact, some accomplished athletes, after mastering the motor skills of their event, will spend up to 90% of their training time in mental rehearsal. This, of course, could not apply to distance runners, but it could apply to a hurdler or a gymnast. And it certainly applies to the Land and Water Obstacle Courses in Military Pentathlon as well as Marksmanship. And quite often, you will see orienteers at our training camps studying maps in their rooms at night while visualizing running from one point to another. In some cases, their pulse rates even go up.

Although Pentathlon novices will not be able to visualize the Obstacle Courses until learning the motor skills during the first week of the summer training camp, you can begin to learn this skill prior to arriving here by visualizing the perfect swimming stroke, the perfect running gait, and the perfect shot with your rifle or pistol. Again, however, the visualization process is to be done only after you have mastered the motor skills.

Keep in mind that mental rehearsal is an acquired skill. You must practice it with the same enthusiasm and dedication as you do your physical training. It can take months or even years to perfect mental imagery training, but it is a skill that all world-class athletes have become very good at doing.

Prior to conducting a mental imagery session, take yourself through the relaxation session described above, the same relaxation process you will go through before you actually practice and compete thus creating a pre-event ritual. Include in this ritual sources of outside stimulation to magnify the effect. Many athletes, for example, listen to music during mental imagery sessions, music that works specifically for them. The music they use varies depending on the event. An athlete, for example, may choose to listen to a high-energy song by Prince that reminds him of the day he won the mile run in a high school track meet. He will listen to this when conducting mental imagery on the Land Obstacle Course to get an adrenaline rush, and later flip the tape and listen to Gordon Lightfoot, a quieter tune, before shooting the pistol, music that for him is calming.

Other athletes have used scent as a powerful means to conjure the energy of a past event they excelled in. One world-class athlete, for example, when writing about the sights, sounds, feelings, and smells associated with a particular past performance in which she excelled, remembered the strong scent of *Babe* permeating throughout the air from a broken bottle of perfume. And thus she later started splashing on *Babe* just before other competitions to place her mind back to the state it was in during that memorable performance in her past.

Different techniques work for different people and so the above two examples may seem odd to you. However, they represent in a simple way the Pavlovian stimulus and response effect to create a desired mental state. Many people will put on certain clothes or listen to certain music to simply lift their spirits. The smell of an evergreen tree may remind one of Christmas even though it's July. And the Clemson band will not hesitate to play the Tiger Rag to get their football team fired up on forth and one. The goal for an athlete is to be able to lift his or her spirits, too, in a specific way to bring his or her mental state to one in which he or she performs best.

What you must do is find out what works for you which can be done by clustering the positive experiences from your past and learning to bring your mind to the same psychological state it was in when you had that peak experience. If you excelled once, you can do it again. You merely have to understand what activities and

conditions you must engage in to bring your mind to its peak competition state. Knowing and repeating how you got there in the past will get you there again in the future.

BEING WORTHY TO WIN

The corner stone of mental training encapsulates the emotional and spiritual make-up of the human being. These invisible parts of us represent who we are. And how we regard who we are in our own minds affects our confidence, our self-esteem, our values, and who we will eventually become and what we will make out of our lives.

Regardless of how gifted you are and how hard you have worked to achieve a goal, when you are standing at the start line of your big race, if you do not feel worthy of the wonderful things that will come to you if you win, your mind will not allow you to escape from your current comfort zone of mediocrity. Thus, you must train in a way, and live in a way that gives you the self-respect you need to allow yourself to be a champion. Perhaps you have heard someone say when speaking about another person's victory, "Wow, that guy deserved it." Such a compliment would be readily offered to anyone who has worked hard, has been honest and selfless in his dealings, and has sought his or her goals for the right reasons.

The question, then, that you must ask yourself is what do you need to do to feel worthy of making this team and winning. This can be a loaded question. For some, to get to this point of worthiness may require reconciling with something in the past, or with another person. To a clinical psychologist, the symptoms of one who suffers from guilt are identical to the symptoms of low self confidence. And both of these internal conditions and dealings affect athletes the same. The mind-body-spirit connection in sports can not be separated. You have to show up to compete with all three, and they all have to be in peak condition. You may have the physical talent to win (the body) and you may know how to win (the mind), but if your spirit is weak, or you do not feel worthy of winning, you won't.

Anything worth doing requires sacrifice. For some, the amount of sacrifice given toward a goal will become their own gauge of worthiness when standing at the starting line of a race. Some may feel that doing volunteer work with children will make them feel worthy of receiving good things. It is true that in order to receive, you must give. If you give good things, good things will come back. The same, however, applies to bad things. What you give is ultimately returned.

This training manual is designed to teach you how to train for Military Pentathlon. It considers the total training concept, the total system: mind, body and spirit. The total training system is further comprised of many processes ranging from flexibility improvement to strength training, from running to swimming, from correct swimming strokes to what you eat.

Building worthiness requires that you give 100% throughout the entire training system, disciplining yourself to engage in every facet of your training program wholeheartedly. One area where you can test your volition is in your diet. How well do you stick to your training diet which you know will dramatically affect your performance if you don't cut corners? Hunger pangs will test your will power in profound ways. It is no wonder that many religions include fasting as a ritual to build personal strength and to test one's commitment to something they believe in. If you were to stick to your training diet, for example, and give up your favorite desert for 8 months prior to a competition, how would this make you feel after time and time again sticking to your guns? For sure, every time you are tempted to go off course, your goal and the importance of your goal will be put in your face to assess whether it is worth it to you to commitment to it totally. And if you do find your goal worthy enough to overcome the multiple temptations outside of your weaker comfort zones, your feelings of personal worthiness will increase, and you will indeed feel worthy of walking away a winner. You'll be able to say to yourself after meeting your goal, "Ya know, I deserved that." And then you will be able to expound for hours detailing the many reasons of why you deserved it.

Build yourself to be worthy of winning. To do this, start by asking yourself the following questions:

- Do I feel worthy of having something very good happen in my life?
- Is my conscience clear, thus allowing me the freedom to focus on bringing something very good in to my life?
- What do I need to sacrifice or give up to reach my goal?
- What do I need to add to my life to reach my goal?
- What do I need to endure to reach this goal?
- Is all this worth it?
- Why?

If you struggled with any of the above questions, examine why. It could be that you have work to do beyond running, swimming, and lifting weights in order to develop what it takes mentally to make this team and win. The mission of our program is to build leaders. Leading others, however, starts with being able to lead ourselves. Many have said that Military Pentathlon is a life-changing experience. If you ask them why, their answers will rarely include anything about physical training or traveling to Europe. Instead, they will talk about sacrifice, learning to go after a goal with total commitment, and the experience of engaging in a process of developing personal worthiness to enjoy the rewards of achieving excellence in their lives in *all* they do. Winning requires change, change that is good.

TRAINING DIARIES

An important part of mental training includes keeping a training diary. Keep your diaries which are provided throughout this manual updated as soon after your training session as possible. Then, at least once a week, review the previous week

of entries, then mentally review the week ahead of you, visualizing every upcoming workout and what you hope to record in your diaries after each upcoming training session. This is often best done on Sunday afternoons along with a conditioning stretching session when no other physical training is scheduled for that day. It's a time to be still and allow your mind and spirit to revisit your purpose for training. When your mind and spirit are in synch, your body will follow.

Section 15

Training Diet

There are a million and one recommended diets. For the most part, whoever has an opinion is an expert. Nutrition, however, is an individual problem; no one diet works for everybody so be careful about copying what others claim worked well for them. However, to perform at your best, proper nutrition is a must. So what's one to do?

To develop a nutrition program that works for you will take time. It starts with committing yourself to this vital part of your training seriously. It involves research, experimenting and patience. The result will be substantially higher performance.

To get started, use the basic food pyramid shown below, tallying the carbohydrates, proteins, and fats in the following range:

CARBOHYDRATES	55-60%
PROTEINS	10-15%
FATS	25-30%

FOOD PYRAMID FOOD SELECTION

BREAD CEREAL RICE PASTA	VEGETABLES	FRUITS	MILK YOGURT CHEESE	MEAT POULTRY EGGS BEANS NUTS	FATS OILS SWEETS
6-11 SERVINGS	3-5 SERVINGS	2-4 SERVINGS	2-3 SERVINGS	2-3 SERVINGS	LIMITED AMOUNTS

Once on this program, you will begin to discover what is best for you based upon your food cravings. Also, through the care of a reputable health care professional trained in sports nutrition, the food pyramid may be altered—in some cases drastically—to accommodate to your specific goals and personal dietary needs and traits. If seeking professional help, select and accept guidance wisely.

Along with your meal(s), recommend a supplement with the full range of vitamins and minerals not to exceed the RDA for each. A good sports drink is okay before and after exercise provided it does not replace your minimum water intake. Required water intake is a minimum of one gallon of water a day plus 8 ounces more for every 15 minutes of training. Proper hydration is imperative for optimum performance.

Keep records of your intake on the following pages for at least a week to discover how close or way off your diet is according to our recommendations. Using the 90% rule, attempt to eat 90% of the rights foods 90% of the time.

Eat to Win

Training Diet

Date: _____ MEALS / SNACKS SERVINGS ➔	BREAD CEREAL RICE PASTA (6-11)	VEGET (3-5)	FRUIT (2-4)	MILK YOGURT CHEESE (2-3)	MEATS EGGS BEANS NUTS (2-3)	FATS OILS SWEETS (LIMITED)	CALORIES ↓
SERVINGS							

You may use the following guide to keep track of calories consumed and burned to obtain a your net daily caloric balance.

TRAINING ACTIVITY	CALORIES BURNED	BALANCE
RUNNING	MINUTES X CAL/MIN = CAL BURNED _____	CAL IN _____
SWIMMING	MINUTES X CAL/MIN = CAL BURNED _____	METAB*
WEIGHTS/OTHER	MINUTES X CAL/MIN = CAL BURNED _____	TRAINING* *
<i>Eat to Win</i>	TRAINING CALORIES _____	BALANCE _____

* Calories burned from basal metabolism is based on sex and age; use a reference.

** Calories burned from one activity to another vary; use a reference.